THE BUILDER

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ADVERTISEMENT AND SINCERITY IN ART.

IT has been stated somewhere that more money is spent annually throughout the world for publicity, or advertising, than for any other purpose. It is the contention of commerce that it requires publicity, so that its products may be appreciated and taken advantage of by as many as possible. Advertisement writing has at different times been termed an art, a science, and a profession, and it may well be that these claims are sound, especially if the contention is that the public must be persuaded into buying something which it does not want. This is obviously an exaggerated point of view, though it must be admitted that the "effective" advertisement will attract the uncritical buying public. To convert the hoarding into "the poor man's picture gallery" seems to be a subtle and popular method of exploiting an argument based upon sophistry. If we must have art on the hoardings, by all means let it be the best that can possibly be obtained; but we need not assume a virtue of what is not an obvious necessity. It is significant that, in many of the fashionable guessing competitions, we are invited not to indicate the posters we like, but what we think is likely to appeal to other people. In this pleasant way we combine our appreciation of art with an interesting form of intellectual snobbery. All the writing upon the artistic value of advertising has not convinced the householder whose view is obscured by a hoarding covered with railway time-tables and notices of property sales. The Prince of Wales, in the course of his admirable speech at the Royal Academy of Arts, expressed his views in these words: "Decadence in art has always denoted degeneration in the community at large, but health and virility in painting, sculpture, architecture, music, or literature—health and virility in these arts are invariably a token that the outlook and ideals of a community are sound." Upon the much debated question of the relation of art to commerce he said: "I do not believe for one moment that industrialism and artistic development are necessarily antagonistic, and that, because a man has keen business vision, he is artistically blind. On the contrary, I have always been impressed by the fact that in the business and working community the artistic ideal is very much alive and only needs an outlet for its expression." In admitting that advertisements are now recognised as a most necessary adjunct to the business side of life, he considered that many a man who had never given pictures a thought had had his interest in them stimulated by a casual study of a poster. No doubt there is a great deal of truth in this, but it is beyond all doubt that the ideal community would ensure that industry as a whole observed the æsthetic refinements which affect the social welfare of a country. It is a cause for complaint that the art which is confined to the hoarding exists primarily for the disposal of goods. There is nothing wrong in this, but it is significant that all the art should be concentrated upon the selling department of industrialism, where the rewards are apparently so obvious.

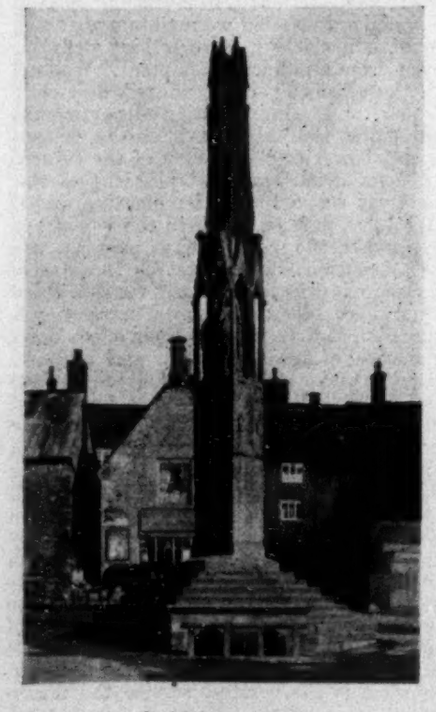
In our opinion, there is a simple test which can be applied to the commercial "picture gallery," which would settle some of the theories held upon art. The suggestion is that manufacturers should exhibit on the hoardings a photograph of their factories and surroundings, along with their claims for the purity and health-giving properties of their commodities. It is at least a more sensible idea than the pretence that a portrait of an actress has any relevant connection with either the commodity or the propagation of fine art. We might then safely leave it to the public to form its own judgment, though we fear the reply of the sceptic, that there are some things which do not depend upon common sense. There are numerous outlets for improvement if we are in the mind to be sincere in our expressions upon art; the factories and workshops, the houses, the desolate waste heaps, and the smoke and grime, are hardly manifestations of a healthy community with advanced ideas upon art and the artistic development of industrial art. We cannot see that we are far on the way when we blacken our Northern industrial areas to produce the goods, and pretend we can brighten the streets of our cities by helping to sell the goods. It seems an unfortunate form of compromise, but, even if we make a distinction between manufacturing and selling, what is there to be said for the stream of unsightly advertisements running from the factory to the city and following us to the sea-side? We read with pleasure in a daily paper a few days ago that Lancashire has taken a definite stand in the matter, "and is taking steps to clear away the hoardings disfiguring the landscape in the Lancashire part of the Lake district."

It would appear that a healthy civilisation must in the end rely upon preventative measures, rather than place too much faith upon the sense of fitness and decency possessed by the average individual with freedom to think entirely on commercial lines. The "universally expressed wish of the great mass of the British public" does not tend towards a sense of real beauty and dignity; the dislike of ugliness and the inability to obtain beauty is not an excuse which can be defended. The national artistic sense can not only be measured by the steps it takes to prohibit what is ugly and harmful; it is also the measure of civilisation. There should be great possibilities in the future if architects turned their attention to the designing of factories and workshops, or perhaps it would be more correct to say, if they were given the opportunity to develop their ideas. Mechanical equipment, routine process work, and mass production belong to the province of the works manager and the engineer, but we cannot believe that the ideal factory can be evolved if we regard it as a mere building surrounding the machinery and plant set out on an engineer's blue-print. During the last year or two we have seen the publication of numerous books upon every phase of industrialism, ranging from economics to the scientific management of works. This is all to the good, but it is significant that the emphasis is invariably upon the physical well-being of the worker, leaving the outward appearance of things, apparently, to come under the heading of equipment. It is easy to write in vague terms about ideals in industry, but industrialism has its obligations, and we maintain that the outward manifestation of industrialism is something definite, and requires consideration from an ethical standpoint. Welfare work is now thoroughly established; canteens, rest and club rooms, ambulance, labour, and administration departments, ablution and changing rooms, are only a few of the factors which will form an essential part of the factory of the future. They will affect the general disposition and planning of the buildings, and suggest great scope for an imaginative architectural treatment. We have suffered much in the past from the bare bones of construction, the meretricious ornament, the sham turrets, and the affectation which attempts to disguise the factory. It is not paradoxical to say that the worst failures are those which do not look like factories. Factories will develop their own expression if they rely for their effect upon a straightforward expression of their structure and purpose, skilful grouping of masses, and carefully studied proportions of windows and general details. We believe that a fraction of the money spent on advertising in public places would materially help to soften the raw edges of the industrialism which we can see on the landscape of any manufacturing district. The sceptic tells us that beauty will come when it can be shown that it will pay and not till then, and that meantime the profits from advertising can be calculated to a decimal. The effective reply is that there are handsome returns in health and happiness which cannot be entered up in the cash book, and that virtue is its own reward. We are not arguing on the assumption that the essence of advertising is the misrepresentation of the quality of the goods; on the contrary, we merely say that it is a nice problem for the philosopher to work out our rewards and punishments, and ascertain what is the greatest service the manufacturer can render to a community.

NOTES.

Old Buildings in Oxford.

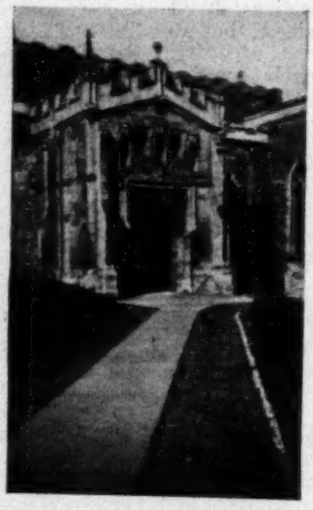
So much has vanished from Oxford that was precious both for its architectural and historic value; so much has taken its place that is not precious in any way at all, that we are glad to see attention called to the danger of any further mutilation or removal of its ancient buildings. And it is not only their destruction but the defacing of them in different ways that we have to deplore—ways such as filling them with modern windows and plastering the walls with advertisements. As stated in the *Times*, "The old houses in the Cornmarket have been fitted with modern windows and the sides of one disfigured with huge, ugly trade announcements." At a meeting of the Oxford Architectural and Historical Society, Mr. F. Madden, a past-president of the Society, said that "he and many others in Oxford agreed that attention should be drawn to these few remaining old houses of beauty and interest." We think, however, the tide is turning against the destruction which has already taken place not only in Oxford but throughout the country, and that a healthier growth of public opinion begins to see that there are other beside commercial interests which it is a claim on our citizenship to revere. We hope that the Oxford Architectural and Historical Society will use its best influence to prevent further destruction or injudicious renovations to these old buildings.



Geddington Cross.
(*See p.* 320.)

Village Signs.

Some three years ago there was an outburst of enthusiasm for the revival of the village sign, the idea having been initiated by the Duke of York at a Royal Academy banquet. Although the movement took on at the time, it seems unfortunately to have somewhat petered out. Nothing could so easily add to the interest of our villages as the reintroduction of the sign on a large scale, and we hope those locally interested in the brightening of village life will not overlook the merits of so simple and effective a measure. As we passed through many villages the other day on a long motor journey we felt strongly the need for some name identification of the villages through which we passed. The sign-post should provide this and so provide an added interest to road travel.



Oundle Church, South Porch.

St. James's Park.

After some six years of desolation London's most beautiful park is at last being restored to its inhabitants. The water is slowly refilling the lake, and the Government buildings that at one time covered its bed and overflowed into the Park on all sides, have finally vanished. In that neighbourhood there now remains, as a war legacy, only the monstrous weather-boarded erection on the Admiralty roof, and we hope that this will soon accompany the St. James's Park war buildings into the land of memories.

London's Traffic.

It looks almost as if the patient Londoner is about to turn upon those who are indirectly responsible for the chaos that reigns in the streets on all hands. Roads seem to be pulled up in the manner best calculated to render worse our already congested thoroughfares. But quite apart from the necessity of organising road repairs and avoiding needlessly tearing up the surfaces of the streets, conditions in the more crowded centres are rapidly becoming unbearable; the Mansion House, Ludgate Circus, and the Strand approach to Waterloo Bridge are nuclei, at least one of which can be guaranteed to cause ten minutes' delay to anyone travelling from the Bank to Charing Cross. The present state of affairs cannot be allowed to continue, and the public will, we hope, insist upon the institution of some central controlling body, one that could regulate the kind of traffic allowed during crowded hours and who could employ some kind of organisation and foresight where none exists at present.

Lead Urn, Drayton.

Road Hogs.

The outcry against London's chaotic traffic coincides with public indignation against the toll of life that is commonly being exacted by thoughtless, foolish and incompetent motorists. It may well be that 95 per cent. of those using the roads are capable and careful drivers, but a very small proportion of the other kind is sufficient to constitute a menace to public safety. It is not legitimate for a motorist to claim that he does not constitute a danger if people behave sensibly. He ought to know that pedestrians often do not behave more sensibly than children, and he must learn that their stupidity is not a sufficient excuse for running them down. Accidents are, of course, inevitable, but they are of much more frequent occurrence than they should be.

Size and Content.

With the number of large buildings recently built, or in course of erection, attention is likely to be diverted from other qualities more intrinsic than size as an end in itself. Size is a quality, an added dignity when seen in relation to

content, but mere size in a building should make no claim upon us. One building is not better than another because it is larger, and proportions determine beauty more than scale. Yet it is becoming customary to seize upon computations of size in denoting the claims of a building upon us, so we find a contemporary making use of headlines to accompany an article on a well-known building, as follows: "Our greatest church" . . . "Half as large again as St. Paul's," and so on. Our purpose is not to enter into the merits of the building denoted in these phrases, but to deprecate the over-insistence of certain aspects to the neglect of others much more important, and which dazzle only to obscure more certain and fundamental issues. Quality—not extent—is the most important, and mere size without the accompaniment of more intimate characteristics is often the poorest architecture. At the present moment, when the contribution of vision and vital craftsmanship is often lacking in architecture, our larger buildings remain the poorer for the absence of this more corporate enrichment; the vision of the single mind is not sufficient in itself. Only when a building is fitted with a significance commensurate with its scale can it appeal to us by its greatness, and size is no alternative to this requirement. Whether at Chartres or Amiens we see the due proportion of significance and vision expressing itself over the whole, and this relation between extent and content charges such buildings with a mighty significance. Otherwise man is supplanted by materials, and size becomes not only a superstition but a monstrosity. We are inclined to ask what justifies such scale when we see mere expansion without expression, when the objects appear to be rents or merchandise only, and architecture is made of use only as a cloak to our avarice. We cannot unite the real issues of beauty, and until architecture includes more corporate expression it will retain the inevitable poverty of the single mind.

Prevention of Fogs.

The report of the Public Control Committee, which has been presented to the London County Council, urges the increased use of electricity and gas for power, and at the same time gives particulars of four main causes of smoke pollution, such as domestic chimneys, industrial operations, railway locomotives, and steam vessels. The opinion is expressed that the question of smoke nuisance is one of great importance, not only as affecting the health of the population, but because of the destructive character of its action. It is also suggested that existing enactments should be revised and codified in one self-contained statute, and that at an early date the Government should undertake legislation to deal with the matter. We are glad to see in this evidence of the growth of public opinion on a matter so much affecting the national life. No one acquainted with city life, especially in industrial areas, can be regardless of the waste in health and wealth which the continuance of the smoke nuisance implies, and we welcome the proposal for Government action. In the past a difficulty has lain in the apathy of people; but that, happily, now no longer exists, and there is a healthy growth of civic feeling towards purifying our cities and making them more what they should be.

The Bank Rate.

The recent rise in the Bank rate from 3 to 4 per cent. is, we are told, primarily due to the continued depreciation of the pound sterling, which has fallen from over 4.72 to under 4.56 to the dollar in less than five months. Apparently, the Bank of England is afraid of the pound slipping too far away from the dollar and, presumably, the intention is to try to check the fall by raising the rate of discount. International adjustments of this nature may not mean anything to the average person; the only questions which concern him are to what extent the Bank rate affects industry, and the income he derives from industry. He is likely to remain indifferent when he reads that the experts do not agree on the matter. The theory that a low Bank rate has enabled business firms to borrow more cheaply than they otherwise would hardly seems to us to be a sound argument, when we consider that firms which are financially sound generally find they have too much money at their disposal when trade is bad. When trade is good their money is being used in manufacturing and in purchasing stock and in developing their buildings. There are invariably two sides to these problems, and if there is a fear that the raising of the Bank rate will accentuate the fall in prices we would point out that financial experts are unable to agree on the subtle question of whether the Bank rate controls the state of trade, or whether it is merely a reflex of the state of trade. In recent times we have proved that trade can thrive on a very high Bank rate, so that there seems little need to worry about any theories which we do not understand. We can all discuss in definite language certain matters which admit of no argument, but it is very evident that the connection of the Bank rate with our personal affairs is likely to remain obscure.

"The Inconsolable." Lorenzo Barlonini, Sculptor.

GENERAL NEWS.

Professional Announcements.

Mr. C. E. Hanscomb, A.R.I.B.A., architect and surveyor, has opened an office at Station-approach, Sanderstead, Surrey. (Telephone, Purley 1151.)

Mr. Richard Byrom, A.R.I.B.A., architect and surveyor, has commenced practice at 9, Victoria Buildings, Silver-street, Bury, Lancs., and would be pleased to receive manufacturers' catalogues and samples for filing purposes.

St. John's Church, Southall, War Memorial.

Messrs. John Daymond & Son, Ltd., Westminster, executed the war memorial at St. John's Church, Southall, illustrated on p. 278 of our issue for August 24.

Appointments.

The Boston District Council has appointed Mr. A. Barton to the position of Surveyor at a salary of £500 per annum.

Mr. Joseph Draper, late Surveyor to Thornaby-on-Tees District Council, has been appointed Surveyor to Bognor Town Council, and takes up his new duties on October 1.

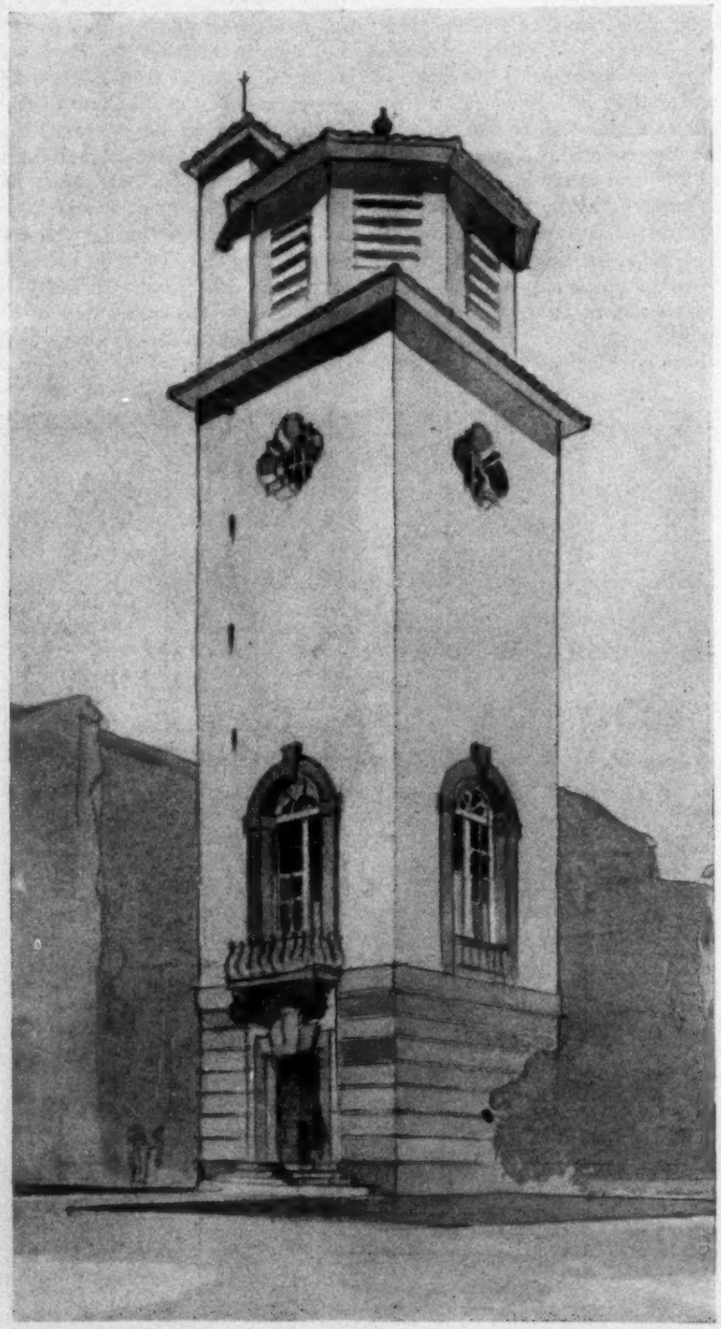
Obituary.

Mr. Charles Steward Smith, J.P., F.R.I.B.A., of Reading, died on Sunday, after an operation. Mr. Smith, who was born in 1858, was the eldest son of the late Mr. Charles Smith, J.P., F.R.I.B.A., of Reading, a well-known local architect and surveyor, and twice mayor of the borough, and as an architect carried on business first with his father and afterwards with his father and Mr. Harry Hutt, A.R.I.B.A., under the style of Charles Smith & Son.

Mr. George Yates Mills, architect, of Derby, who died at the residence of his son-in-law, Capt. Kendal, of the Surrey Docks, London, was many years ago on the architectural staff of the Midland Railway, but left to commence business upon his own account. Mr. Mills was the architect for many large local buildings and for Nestlé's Ashbourne and Tutbury factories.

The New Housing Scheme.

Several housing matters came before the Coventry City Council last week. The Housing Committee reported having discussed with representatives of the Building Trades Employers Association various matters connected with the erection of houses under the Act of 1923, and recommended the Council to supplement the Government assistance (equivalent to £75 per house) by a further grant of £25, making a total of £100 per house, subject to compliance with the approved conditions. The committee further reported it was not prepared to take over unsold subsidised houses, and that the decision not to assist houses erected outside the city be adhered to. The houses to be qualified for assistance would be (1) two-story cottages (an attic permitted in addition), (2) one-story cottages or bungalows, (3) houses built in flats, each flat being self-contained and treated as one house, the superficial area to be: Two-story cottage, minimum 620 superficial feet, maximum 950; one-story cottage, bungalow or flat, minimum 550, maximum 880. These minimum measurements might, for a limited number of houses, be reduced in the case of a two-story house to 570 super. ft., and of a flat or one-story house to 500 super. ft. The Council gave unanimous consent to the recommendations.



Architectural Association Schools Students' Work.

Design for a Campanile. By Mr. R. C. Erith (Second-year Student) (*See p.* 323).

COMPETITION NEWS.

Bergen.

The result of the competition organised by the municipality at Bergen in connection with the building of a new bridge over the Nygaardsstrommen is as follows:—First prize (Kr. 10.000)—Dr. Moritz Ritter, engineer, of Budapest; second prize (Kr. 8.000)—Engineers: F. Selmer, of Christiania and the Harkort Co., Duisburg; architects, L. W. Wilhelmsen & Crawford, Jensen, Christiania; third prize (Kr. 6.000)—A-S Stoltz Rothing & Co., Bergen, and the Harkort Co., Duisburg.

Manchester.

Messrs. The D.I.C. House (Cross-street), Ltd., of 16, John Dalton-street, Manchester, have invited a certain number of architects to submit designs for a new building in Cross-street. Professor C. H. Reilly, F.R.I.B.A., is the assessor.

Coatbridge.

Designs for a war memorial in West End Park. (See advertisement this week.)

Other Competitions.

Other competitions still open include the following (the dates given are, first the sending-in date, and second the issue of *The Builder* in which full particulars were given):—Singapore College (Jan. 1, 1924; March 30). Hull Art Gallery (Nov. 5; May 4). Mint competition for plaques (Sept. 30; May 25). Birmingham Masonic Temple (Sept. 12; June 22). Colour scheme (Sept. 30; June 29). Memorials to the Missing (Jan. 1, 1924; Aug. 3). Wirral Infirmary (*Banned by R.I.B.A.*) Halifax Lay-out—*Banned by R.I.B.A.* (Oct. 1). Swansea Masonic Hall (Oct. 3). Eastleigh and Bishopstoke Assembly Hall (Aug. 24). Chiswick Lay-out—*Banned by R.I.B.A.* (Oct. 15; Aug. 24).

THE ASEPTIC HOME.

By NORA ROBERTSON.

The model home is becoming a cult. Few of us can hear it described without first experiencing a sense of guilt at the inadequacy of our own appointments, followed, if we have any spirit, by reaction and rebellion against its tyrannies. For, after all, who wants to live in a model home? And, indeed, can it be called a home at all, or is it anything in its chilly, hygienic self-consciousness but a model interior, the freak of didactic lecturers, generally well-informed ladies, who profess a monopoly as to what women want?

Armed with an order to view, let us go over one of these ideal maisonnettes in Spain. The philosophy co-relating the several parts is based upon the Idea of dirtphobia and the Will to fittings. It is also immoral to accumulate. The bedroom contains a bed, otherwise it has no furniture, and, in its awful pristine cleanliness so closely resembles a public lavatory that one would unconsciously leave a tip after washing in the laid-on basin. The various cupboards are fixtures, aggressively so; the dressing table, also a fixture, slides in or pulls out when required; boots are tightly parked in a boot locker concealed under a window seat, itself "inexpensively improvised by the village carpenter." The floor is bare and polished, carpets, of course, being taboo. The angles are rounded. The door surface is flush. There is no fireplace (really model homes are communally heated). The radiator is painted white, so is the pull-out table; the walls are distempered white; in fact, everything is white except the sheets, which are crude coloured checks "to break the insipid monotony of tradition."

Next door is the nursery. The nursery is peculiarly holy in the model home, and the details must be familiar to any visitor of recent exhibitions, where the charming notions of our young princesses are interpreted by enterprising tradesmen. Everything is the right height. There is an art frieze, no wall paper, no pictures, no corners, no microbes, and no character. We carry away the impression of acres of cork carpet, and a round table with a bowl of roses. The nursery we remember best had nothing model about it; it was a shameless hotch-potch, and it had a patterned carpet, invaluable to a generation that played marbles, a scrap screen, a solid square table, with an ink-stained chenille cloth with coloured bobbles, and enthroned on the table the family sewing machine. The place may have been full of microbes, but good ones no doubt were included.

The model bath-room is altogether satisfactory, so much so that we deplore the day when it in turn must be supplanted by the adjustable human nozzle, "so readily affixed to the electric vacuum cleaner."

We will not dwell in the sitting-rooms; they are ingenious; nearly every article of the few pieces of furniture can do three or four other things besides the one to which we are accustomed, and the scheme is either quite without colour or jazzingly full of it. Instead, let us hurry on, and, reverently removing our shoes, explore the kitchen. Here it is that the philosophy of dirtphobia achieves its logical triumph. Everything gleams with the high light of spotless virtue. Food in its crude state, or a cook, would be an anachronism. Note the absence of the familiar centre table; instead, there is "space" and a side pull-out. There are no beloved drawers containing hatpins, "Mrs. Beeton," and the screw of the mincing machine; in their place are glazed dust-proof shelves behind which are paraded the aluminium non-drip teapot, the hay box, mysterious chafing pans, and the other burnished surgical implements of refined no-handed cookery. Awed by the experience of our visit we return home and contemplate.

In theory, every feature of these carefully devised houses is logical, perfect and admirable, but the reiteration makes the sum of their achievement irritating to the ordinary, illogical human. For, even after making every allowance for the service difficulty, is there an immediate necessity to Americanise the details of our surroundings? Home to us here still means accumulations, generally traditional ones; it means compromise, it expresses the varying tastes, hobbies and moods of a family, and it cannot do all this and remain surgically clean. Probably the present aseptic house frenzy is a reaction from the fussy war of exhaustion which so many English housewives unsuccessfully wage against perfectly inoffensive dust.

If but an iota of that zeal were used to reinforce the campaign against the vile dirt of smoke pollution the gain to society would be immeasurably great and hours of energy would be saved. Let us preserve our homes as inherited, evolving them reasonably as the need arises. They are institutions that cannot be remodelled nearer to the heart's desire by the process of first being scattered to bits, and if, in defending their charm, we fail to keep them up as perfectly as we used, then let them rest a little dirty. The present writer, not being indigenous to this island, had never even heard of a spring-cleaning, much less submitted to one, until she left her own adjacent island. It may be unfortunately true that the matrons of England are not to be led so agreeably astray, and, after all, they have their reward; but the cleanliness that is next to godliness is a superfluous virtue in the other island that is claimed by the Saints, and where among its many mansions the model home finds no place.

Birmingham Archæological Society.

A two-day excursion to Kettering and neighbourhood was held last week by the Birmingham Archæological Society with an abundance of interest. Among the places visited were the Rothwell Holy Trinity Church, of Norman architecture, where there is a crypt said to have been used as a charnel-house containing the bones of some 4,000 persons, and Boughton House, the residence of the Duke of Buccleuch. The villages of Geddington, Brigstock and Lowick were visited, and at the latter the party were conducted over Drayton House, the home of Colonel Stopford Sackville, one of the oldest and most interesting houses in the country. It was built in the reign of Edward I. At Geddington, the Queen's Cross, built in 1290, in the reign of Queen Eleanor, was visited.

CORRESPONDENCE.

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

Competitions.

Sir,—The recent correspondence in your columns on the subject of competitions has raised a further thought in my mind which may possibly be worthy of consideration. The point is: Do we not, as a rule, make our competition drawings far too elaborate, and could we not, by the process of general agreement, reduce much of this elaboration and so cut out a great deal of unnecessary work and expense without loss of efficiency? Of course, one realises that if architectural drawings are to be judged by amateurs, it is indeed probable that the design which would result in the best building may be rejected in favour of one more elaborately presented,

But, when designs are examined by experts, surely we may assume that the object of the assessors is to think in terms of the ultimate building, and they can do this quite well with far simpler drawings than those usually submitted. Lest there be any misunderstanding, I will say definitely that I do not desire to encourage bad draughtsmanship or to discourage good draughtsmanship for competitions; but rather to suggest that less elaborate sets of drawings, well expressed by good, clear, and simple draughtsmanship, are all that expert assessors need in order that they may decide from which set the best building is most likely to emerge.

A general agreement on this point, together with the adoption of the jury system, might well result in competitions being far more popular than they are at the present time. What is more important is that this combination would probably also result in sheer design triumphing even more frequently than at present over the meretricious.

W. S. Purchon.

Cardiff.

City of Hull Cenotaph.

Sir,—Apropos the correspondence in *The Builder* on architectural competitions. I give below a few points of bad organisation in connection with the above competition:

(1) The advertisement calling for designs appeared in *The Builder* for June 22 and stated that conditions, &c., would be available after June 18. (2) Although I made early application for the conditions, I did not receive these particulars until July 9. (3) The printed conditions stated that questions from competitors could not be entertained after July 2, and any such questions, with replies, would be circulated to competitors and form part of the competition. In my position, what chance had I to ask questions? Whether "Questions and Replies" were circulated I do not know; I did not receive a copy. (4) The printed conditions gave the sending-in date as July 25, but although one casually noticed in *The Builder* for July 20 that the sending-in date was given as July 31 one rather took it, seeing that no direct communication as to extension of date had been sent by the promoters to competitors, that this was a misprint. I sent my design off to reach Hull by July 25, on which day I was greatly annoyed to receive a postcard informing me that the closing date had been extended to July 31. Under this point surely the proper course to have taken would have been to inform individual competitors direct.

R. Price.

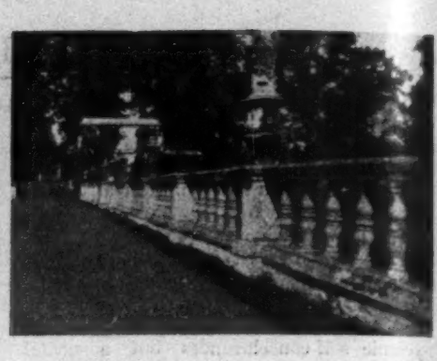
Bridgnorth.

Other Letters.

Other letters are given on pp. 340 and 341.

Drayton House: Lead Urns.

Montague Almshouse, Weekley



Drayton House: Balustrade of Parterre.

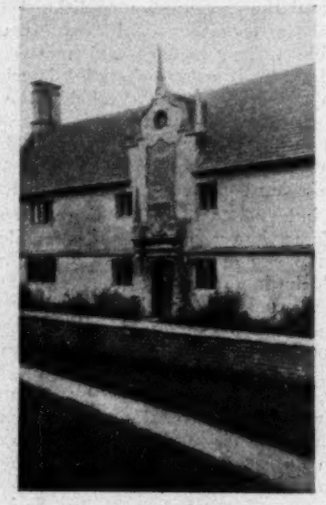
THE NENE VALLEY.

By G. NORBURN.

Few districts offer greater "riches in a little room" to the architectural holiday-maker than the Nene Valley, from the Saxon work of Earl's Barton and Brigstock to the work of John Webb at Thorpe, and the charming restoration work at Oundle.

Kettering is an excellent centre of a good district; though itself robbed of much of its interest by very necessary street widenings, it still shows us a splendid church with a notable tower and spire. At Rothwell, four miles away, is the interesting Market House, begun in 1577 and left unfinished by that Sir Thomas Tresham whose son was implicated in the Gunpowder Plot. The detail exhibits grace and refinement, and is much akin to his other unfinished Lyveden New "Bield," ten miles away. This Sir Thomas was a keen builder, but, being also a staunch Roman Catholic, had to suffer fines and imprisonment for his opinions, which prevented his projects from attaining fruition. His only finished work which has come down to us is the peculiar triangular Lodge at Rushton, standing in a remote corner of the grounds of Rushton Hall. Its solitude, coarse detail, and uncommon shape at first repel, but, trying to pierce through to the motive in the mind of the builder, one remembers that it was built as an emblem of the Trinity, notes the play of triangle, trefoil and triple gable, and realises that it remains as one of the quaintest of the "quaint conceits" of the Elizabethan age.

Three miles or so from Rushton, set among those splendid elm avenues planted over 200 years ago by the eccentric Duke of Montague, is the village of Geddington, chiefly famous for its cross, which I certainly think is one of the most beautiful mediæval monuments left to us. It is triangular in plan and set on a hexagonal base of steps; the lower part is covered with diaper work, which, being on a slightly waving surface, is delightful in effect.



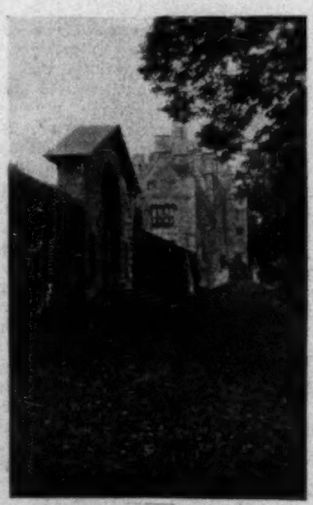
Montague Almshouse: Central Feature.

Above, a statue stands on each side in a niche with canopy over, and this is carried up to the summit, and works out in a very fine and logical manner.

Between Geddington and Kettering is the village of Weekley, where, shyly tucked away near the church, is the Montague Almshouses or Hospital, presenting that simple grouping of window, gable and chimney so endearing to English eyes. Over the doorway a sundial is painted in dull red with a black border, which has faded during the years to an unobtrusive hue, yet still gives a pretty spot of colour; the date, 1611, is also painted on in black. The gates opposite lead to the park of Boughton House, which has an interesting wing built in a French manner by one of the Dukes of Montague, who was Ambassador to France in late Stuart times. He and his kin are buried in the adjacent church of Warkton under monuments in the full-blown manner of the eighteenth century, about whose artistic value there may be two opinions.

Six miles from Kettering and two from Thrapston, in a secluded hollow, stands Drayton House, over which Horace Walpole was justifiably enthusiastic, and which has among its many treasures a wealth of wrought ironwork and lead work, and a seventeenth-century parterre, with fountain, vases, and banqueting houses at two corners. "Just," says Walpole, "as Sir John Germain brought it from Holland." What we see now of the exterior is mainly Elizabethan, the mediæval house having been largely added to about 1584. The fine, almost Baroque, façade and colonnade to the courtyard were built about 1700 by Sir John Germain, the reputed half-brother to William III. Notable features of the interior are the dining-room, a gem of Adam decoration in soft colour with an excellent mantelpiece by the same hand; the ample walnut, winding staircase cantilevered from the wall, is a masterpiece of carpentry, and leads to the long gallery, now a library from which one can get an excellent view of the parterre below. The fireplace in the King's Bedroom is by Webb, and his original drawing for it still exists, showing that his mantelpiece surround has been largely removed, leaving the upper part rather unrelated to the lower, though the bold swags on each side of the shield are intact.

Webb left a drawing for another fireplace at Drayton, which seems never to have been carried out, and his direct connection with Drayton ends here, though I cannot help thinking that he may have had a hand in the designing of the north door to the garden. There is strong evidence that Sir J. Germain employed Tijou for the wrought ironwork, of which there is such an amplitude. This may help the resemblance to Hampton Court which he was accused of striving for. The stone staircase, with its wrought iron balustrade and balcony, is unusually fine, as is that to the outside stairs leading into the garden. The lead work, vases, statues and the magnificent rain-water head owe their presence largely to Germain's second wife, Lady Betty, to whom (strong-minded lady) our thanks are due for resisting the fashions of the landscape school and preserving to us the garden in its original form. But we must leave Drayton and pass on, having already lingered too long in this



Drayton House: Looking up the Bowling Alley.

Drayton House: Gate to Gardens.

Thorpe Hall: Door to Stable Yard.

haunt of beauty so typically English in itself and in its charming and enthusiastic owner.

Oundle, a quiet stone-built town, is becoming quite collegiate in atmosphere, with the buildings of its school spreading serenely about it. The church is famous for its spire and tower, and has a good south porch. The Talbot Inn (1626) and the White Lion Inn (1641) have fronts of the interesting and satisfactory traditional type, which lingered on so long in the stone districts. The former has a fine oak stair reputed to have come from Fotheringhay Castle, and which has a strong family resemblance in detail to that of Lyveden Old "Bield," the family home of the Treshams, three miles away. In the dining-room, now occupying the whole of the first-floor front, are some interesting sixteenth-century fireplaces. Romance also attaches to the window now lighting the staircase, which came from the great hall of Fotheringhay Castle, and which must have looked down upon the trial and execution of the unfortunate Queen of Scots. Among later work is a boldly-designed house on the south side of the square, and nearly opposite a row of shops, unusually treated, with a colonnade on the ground floor and houses over, the gables finishing off with a large edition of the typical Northamptonshire chimney. This colonnade may have been inspired by or have had some connection with the Market House still standing, and which was, as usual, open on the ground floor.

Four or five miles further on lies the village of Fotheringhay. The Castle, once a Royal fortress, is only now marked by a few mounds. The fine Perpendicular church must have had one of the best proportioned interiors in England before the chancel was destroyed. It was attached originally to a college refounded by Edward IV, and still retains the fine oak pulpit presented by him, though the benches of the choir are now in various churches in the country round. Travelling on towards Peterborough, we cross the Great North Road at Wansford, with its delightful old bridge over the Nene, and the old Haycock Inn at its southern end, no longer an inn, but still a delight to the eye as a vigorous piece of design.

What little is left of old Peterborough has been so thoroughly described that I will pass on to Thorpe Hall, lying between Peterborough and Castor. It was built by John Webb about 1656 for Oliver St. John, Lord Chancellor during the Commonwealth, whose badge crowns the north and south gate piers. The house, outside and in, may almost be termed an epitome of Webb, and is, singularly, as he must have left it. It exhibits the tricks he loved, the returned and mitred architrave, and the scroll volute, certain reminiscences of Jacobean tradition. The interior is almost more interesting than the exterior.

Thorpe Hall: Office Wing.

Built of Ketton stone, which has weathered to beautiful tones, the outside may be described as handsome, having much of that masculinity that distinguished the work of Inigo Jones. The chimneys are a very striking feature, being large, boldly rusticated, and richly capped. Those on the stables are equally striking, and enhance the grace and lightness of the bell cupola. The doorway in the wall of the yard is an interesting version of such a subject, but the smallness of the keystone is an undoubted defect. That all this is by the same hand can be seen by comparing the centre feature of the office buildings with the façade of the gazebo. This appears from a plan made by Hakewell about 1650 to have been the centre feature of a range of buildings now gone, this part having been rebuilt on much the same axis, but further forward, and, though it suffers from its very incompleteness, it is still a characteristic and beautiful piece of design. The treatment of the pilaster caps with their trusses carrying the cornice over is decidedly bold and original.

The iron balustrade of the south porch is most interesting as a transition between the crude cut work of the Jacobean smith and the more dexterous wrought work of the Restoration. The design is complicated and flowing, but, cut from sheet metal, giving an unusual effect, one expects the depth of wrought iron and sees only the flatness of sheet. The ironwork of the gates appears to be later, and is not up to the standard of the noble gate piers, which attain much character and vigour by the unusually large bed mould to their cornice. Thorpe, though comparatively small, is an excellent example of the phase of an architecture which was due to Inigo Jones and untouched as yet by the genius of Wren. One finds Webb at his best and comparatively free from the heavy touch which often prevents his work from attaining greatness.

Below Peterborough the course of the Nene lies through the Fens, and the interesting stone district ceases, making it a very good point to break away and cross into the Welland valley to the ever-fascinating Stamford.

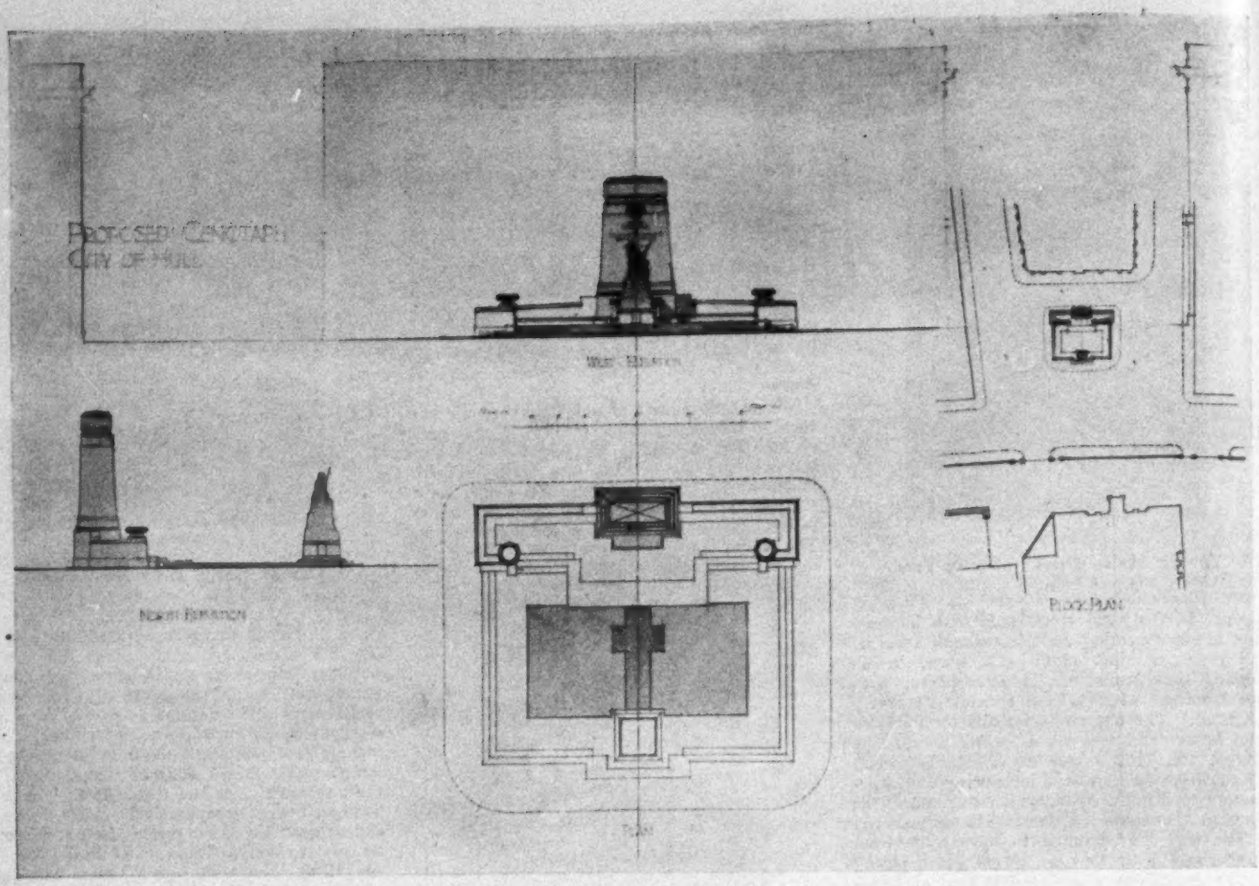
Thorpe Hall: Entrance Gate.

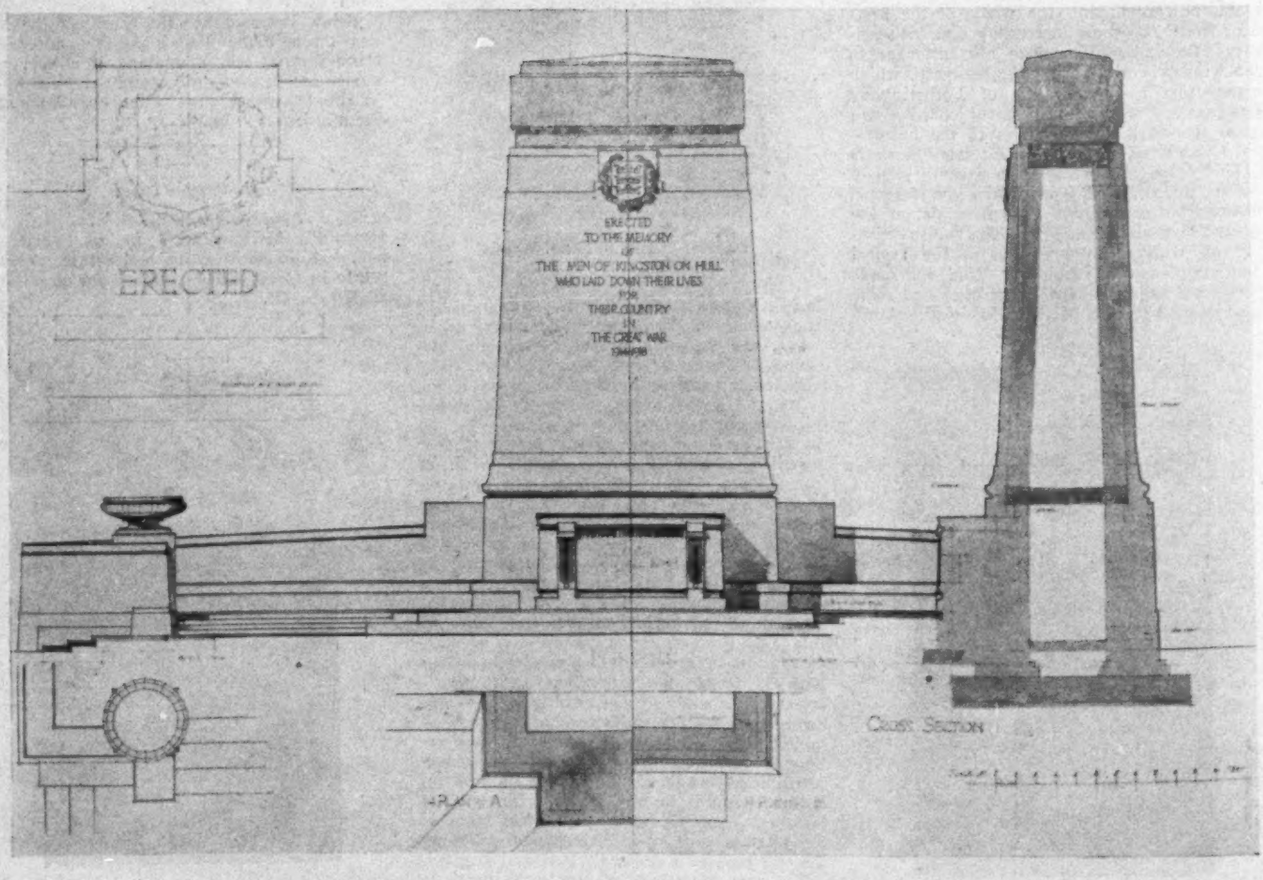
Thorpe Hall: South Front.

Thorpe Hall: South Porch.

Architect's Estate.

Mr. William Walker, F.R.I.B.A., of 81, North-street, St. Andrews, who died on February 7 last, left, in addition to real estate, personal estate in Great Britain valued for probate at £2,326 4s. 4d.





Hull Cenotaph Competition. First Premiated Design: By Mr. T. H. Hughes, A.R.I.B.A.

[The full result of this competition was given in our last issue.]

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ILLUSTRATIONS.

Normal Training College, Peshawar.

This building has recently been completed, and is situated about three miles outside Peshawar on the road leading to the Khyber Pass into Afghanistan. Building operations were commenced in 1919, but owing to the Afghan War work was suspended, as the materials collected were taken for war works on the Indian frontier. The college has been erected from funds provided by Government, and is intended as a training centre for teachers at the various Government schools in the North-West Frontier Province.

The accommodation comprises, in the main building, eight class rooms, Principal's office, clerks' office, common room and library. An assembly hall is arranged in the quadrangle at the back of the main block. Living quarters are provided for 124 Indian students in two wings, with separate dining rooms and kitchens for Mohammedan and Hindu students respectively.

The building has been designed in a simplified form of Mogul architecture. The main walls are built of bricks manufactured locally. The floors and roof are constructed of reinforced brickwork slabs supported on reinforced concrete beams. The total cost of the building amounted to Rs. 3,23,000 (£21,533).

Mr. B. Matthews, F.R.I.B.A., Consulting Architect for Military Works in India, was the architect for the work, which was constructed under the supervision of Mr. F. S. de V. Gould, A.M.I.C.E., Mr. L. W. Amps, A.M.I.C.E., and Mr. A. O. Morrison.

British Officers' Hostel, Peshawar.

This building has, owing to the shortage of bungalows, been erected by the Government for the housing of British officers and families whilst stationed for duty in Peshawar.

The accommodation consists of sixteen unit suites, comprising sitting and bedroom, dressing room and bathroom. Single officers occupy one-unit suite and married officers two or more unit suites according to size of family.

The permanent dining and drawing rooms are now under construction, also an additional block of quarters similar to that illustrated. At present this accommodation is provided temporarily in tents.

All main walls are constructed of bricks manufactured at Government kilns in Peshawar. The roofs are formed of reinforced brickwork, which consists of steel bars placed between the courses of bricks. A light corrugated iron roof has been erected over the flat roof to protect the main roof from the excessive heat of the sun during the hot weather.

A special feature of the design are the hinged louvres in the verandahs. During the cold season these can be opened to admit the maximum amount of light, and during the hot weather they remain closed to protect the main walls of the building from the direct rays of the sun.

The cost of the building amounted to Rs. 1,30,000 (£8,666). The rent of each unit suite, including furniture and electric light installation, works out to Rs. 45 (£3) per month.

The building was carried out under the supervision of Colonel H. A. D. Fraser, R.E., and Capt. F. S. de V. Gould, from plans prepared by Mr. B. Matthews, F.R.I.B.A., Consulting Architect for Military Works in India.

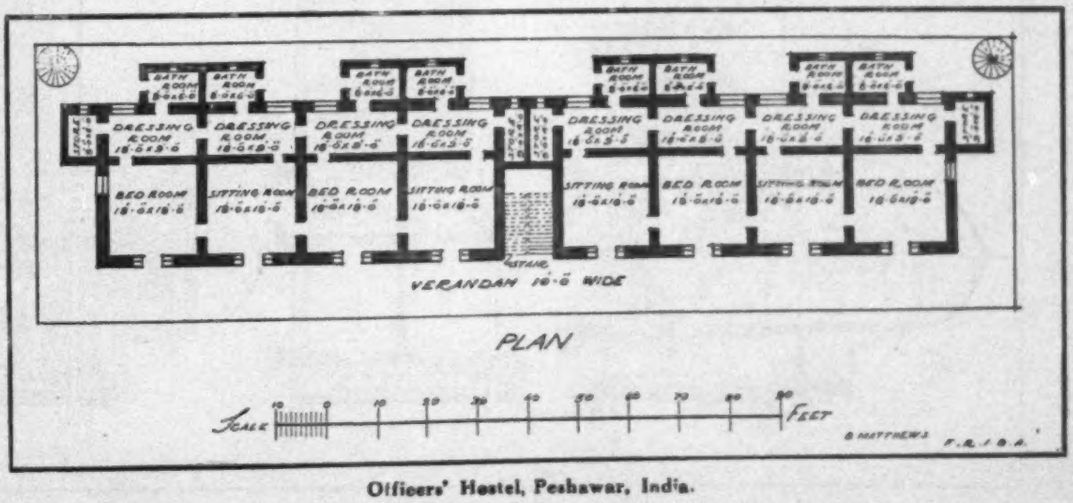
Students' Work of the Architectural Association.

We illustrate this week drawings of the various years of the Architectural Association Schools—an article describing the exhibition, at 34, Bedford-square, appeared in our issue for August 3.

The drawings show the results of the A.A. teaching, which endeavours to avoid any straining after preconceived ideas, and to lead to a natural and unmannered architectural expression.

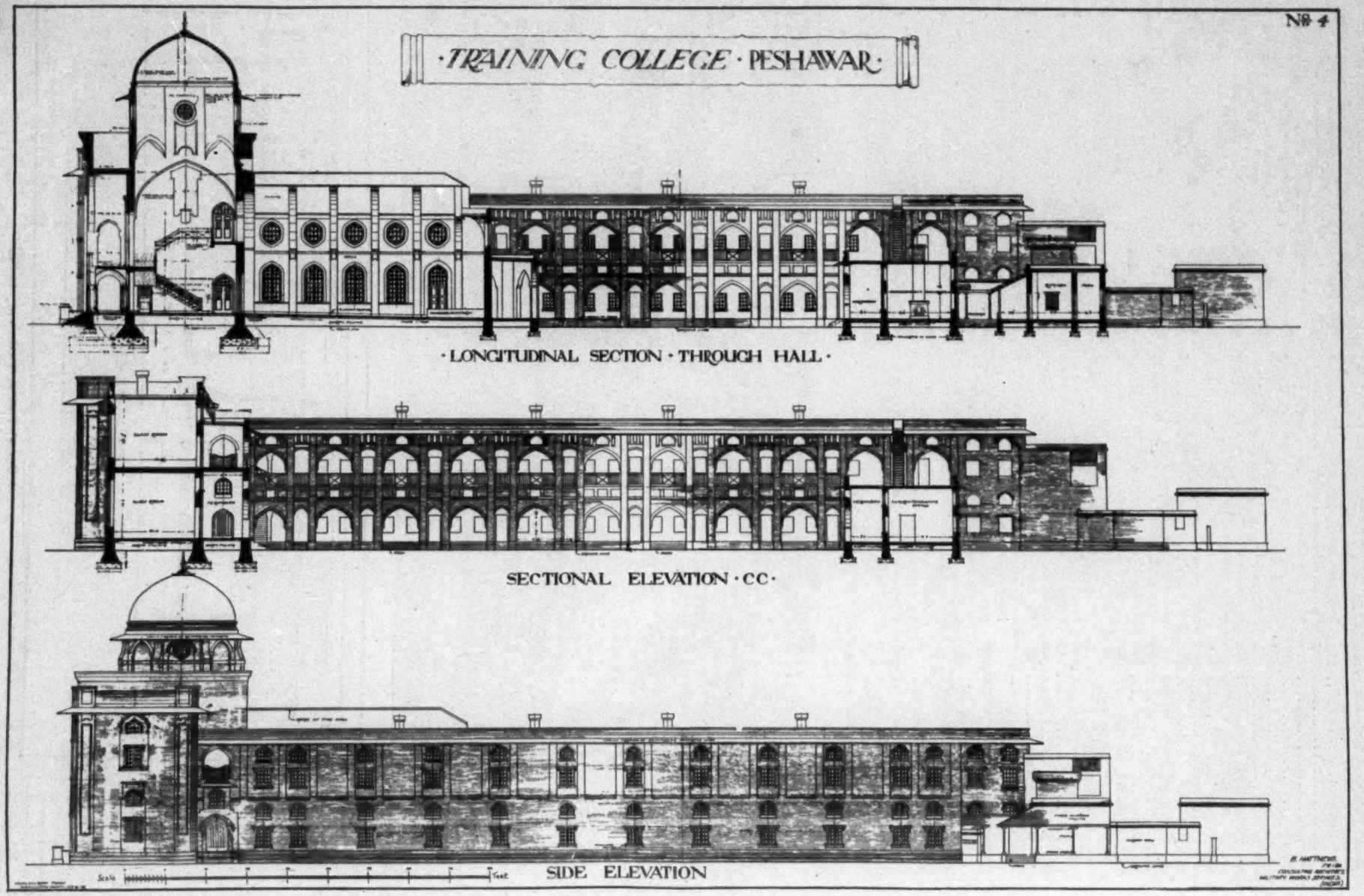
Southwark Cathedral.

An appeal is to be made for a fund to meet the cost of the renovation of Southwark Cathedral. Canon Haldane, the Precentor, informed a Press representative that the condition of the fabric was causing considerable anxiety to the chapter of the cathedral. A scheme for the renovation of the Gower tomb, erected to the memory of England's first great poet at a cost of about £300, was also being considered, but unfortunately the cathedral authorities had no funds at their disposal for the purpose. The advice of a well-known architect had been obtained as to the condition of the whole of the fabric, and the Bishop of Southwark and the members of the chapter were considering his report.



Officers' Hostel, Peshawar, India.

MR. B. MATTHEWS, F.R.I.B.A., Consulting Architect for Military Works in India.



Mr. B. Matthews, F.R.I.B.A., Consulting Architect for Military Works in India. (*See p.* 323.)

ASSEMBLY HALL FROM QUADRANGLE.

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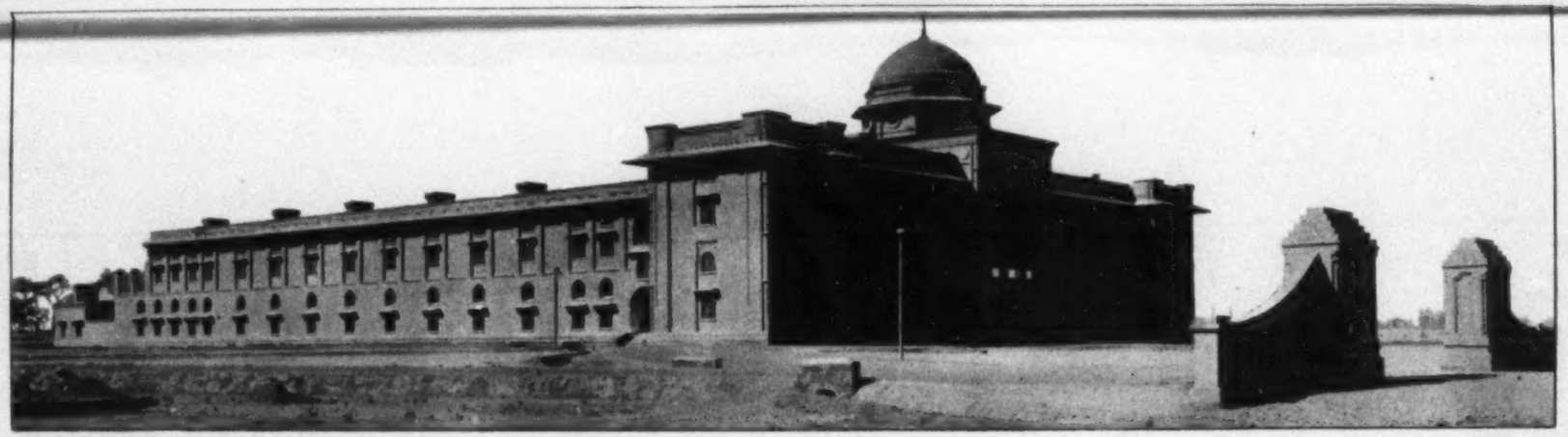
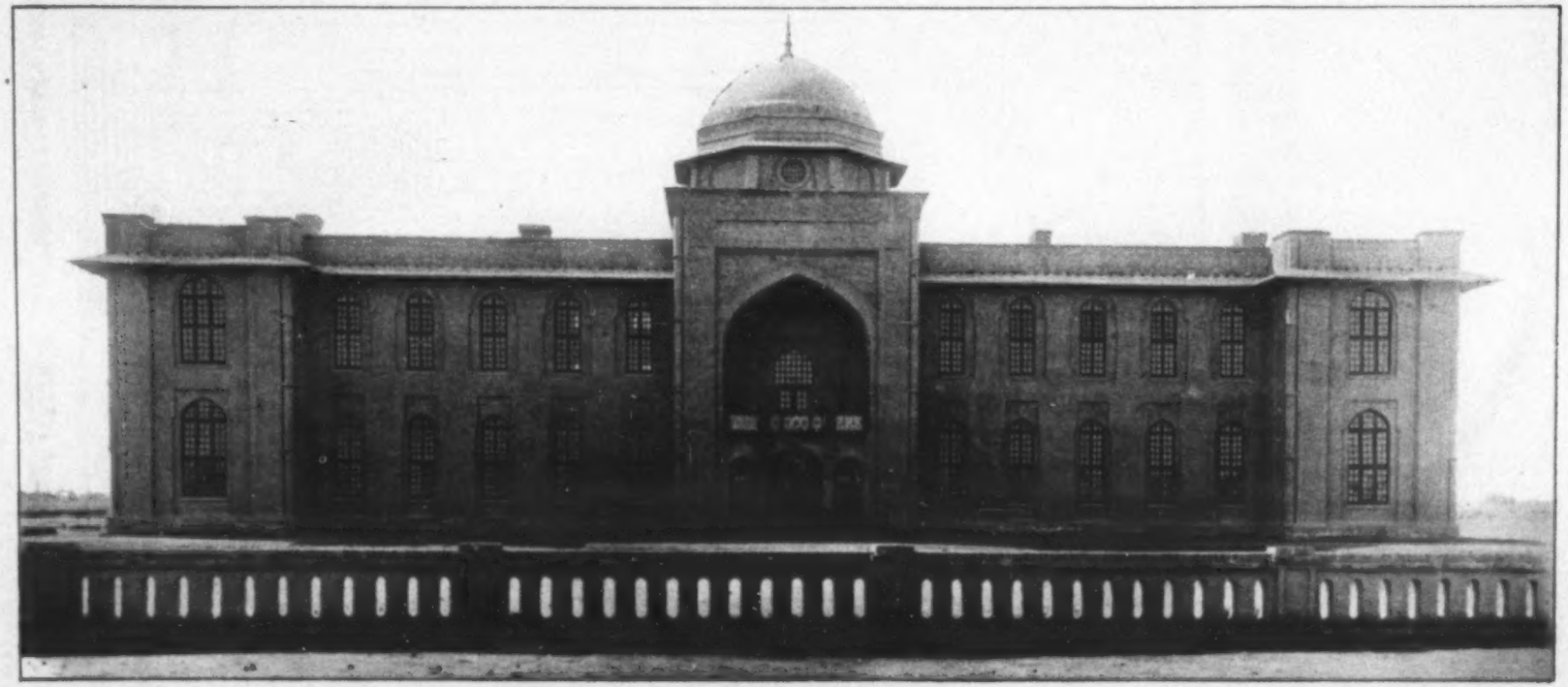


VIEW FROM MAIN ROAD.

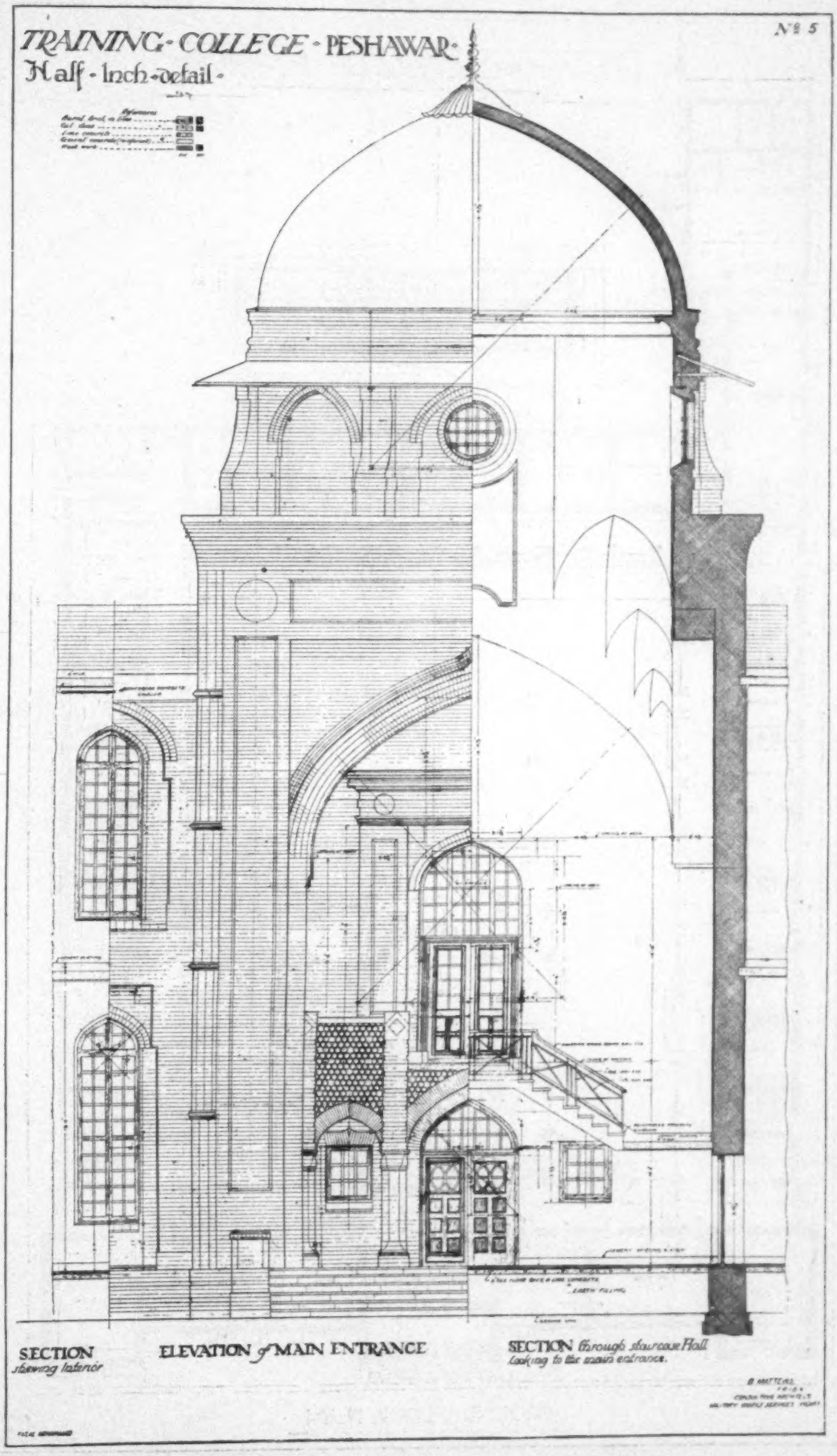


MAIN FRONT.

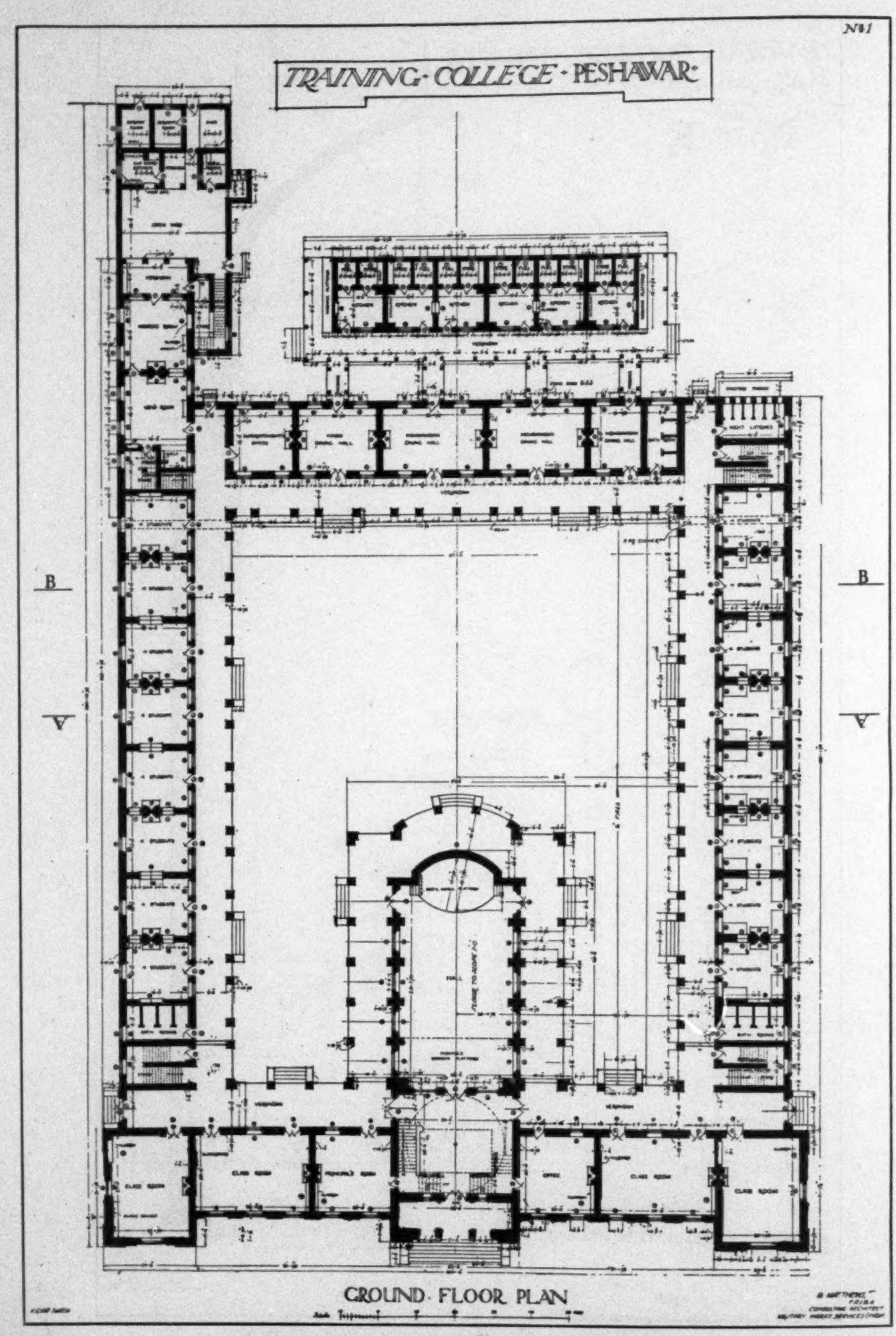
NORMAL TRAINING COLLEGE, PESHAWAR.

MR. B. MATTHEWS, F.R.I.B.A., CONSULTING ARCHITECT OF MILITARY WORKS IN INDIA.

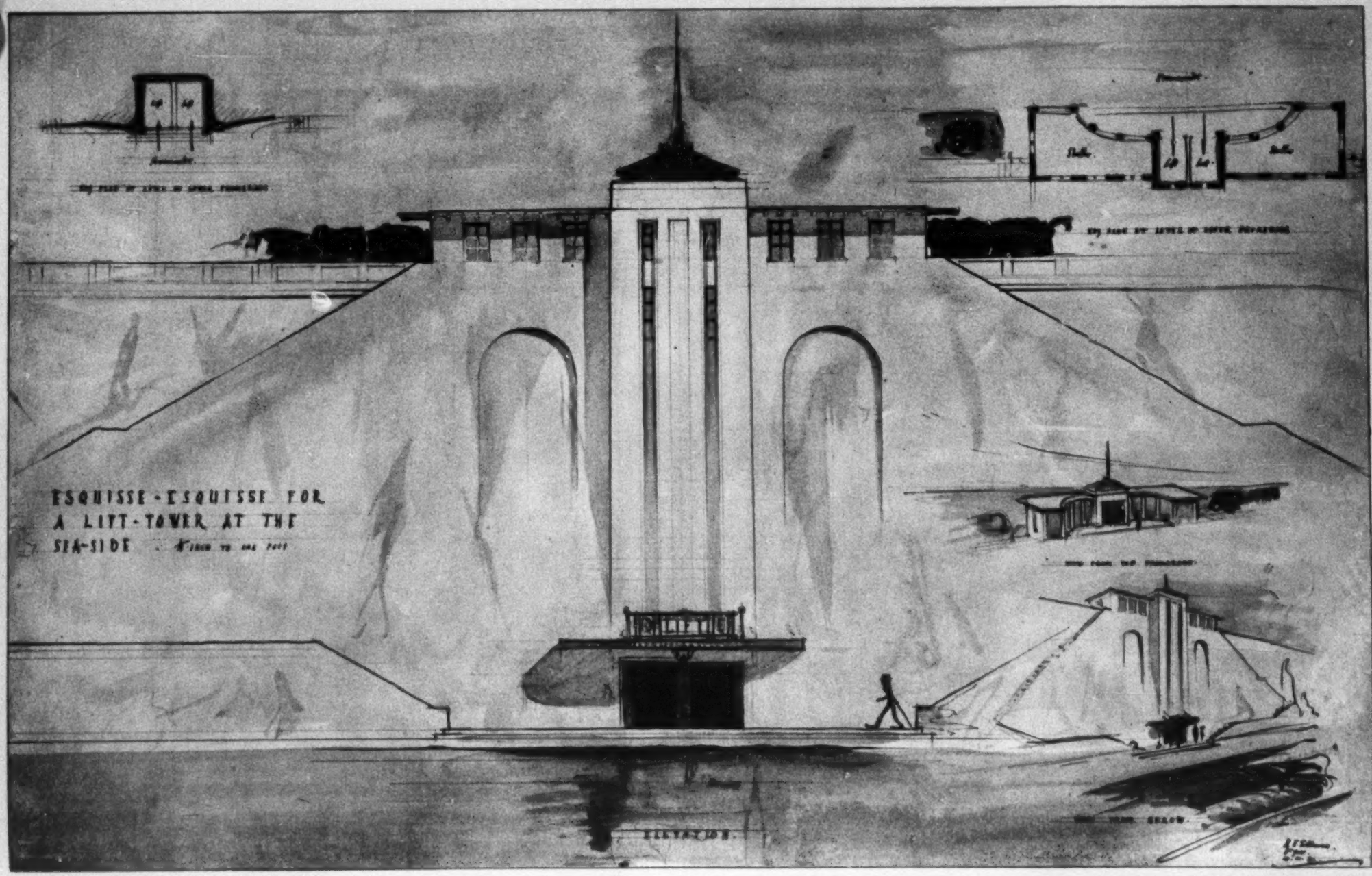
ER, AUGUST 31, 1923.



Mr. B. Matthews, F.R.I.B.A., Consulting Architect for Military Works in India. (See p. 323.)



Mr. B. Matthews, F.R.I.B.A., Consulting Architect for Military Works in India. (*See p.* 323.)



ARCHITECTURAL ASSOCIATION SCHOOLS STUDENTS' WORK.

DESIGN FOR A LIFT TOWER, BY MR. R. E. ENTHOVEN (FIFTH YEAR STUDENT).

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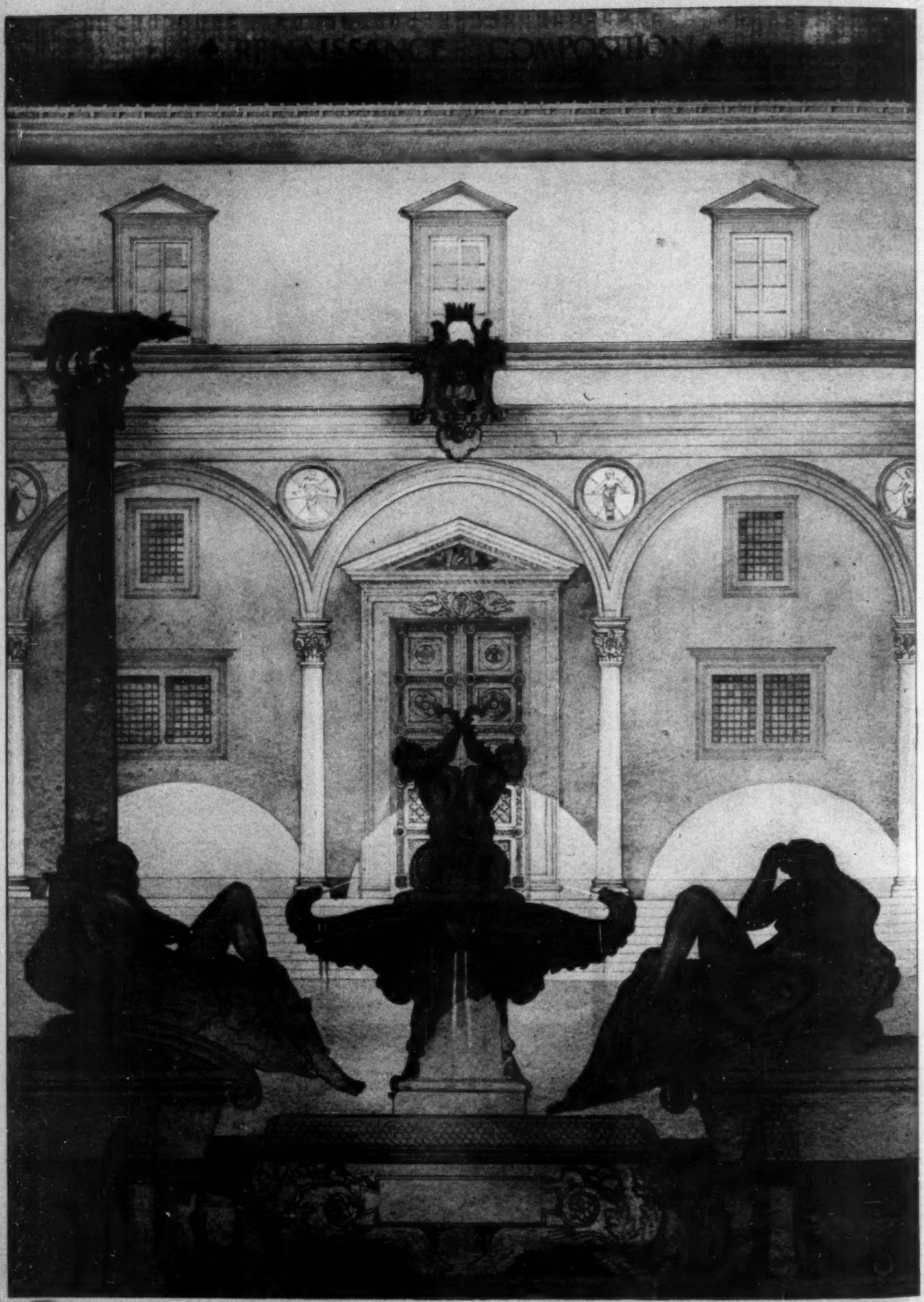
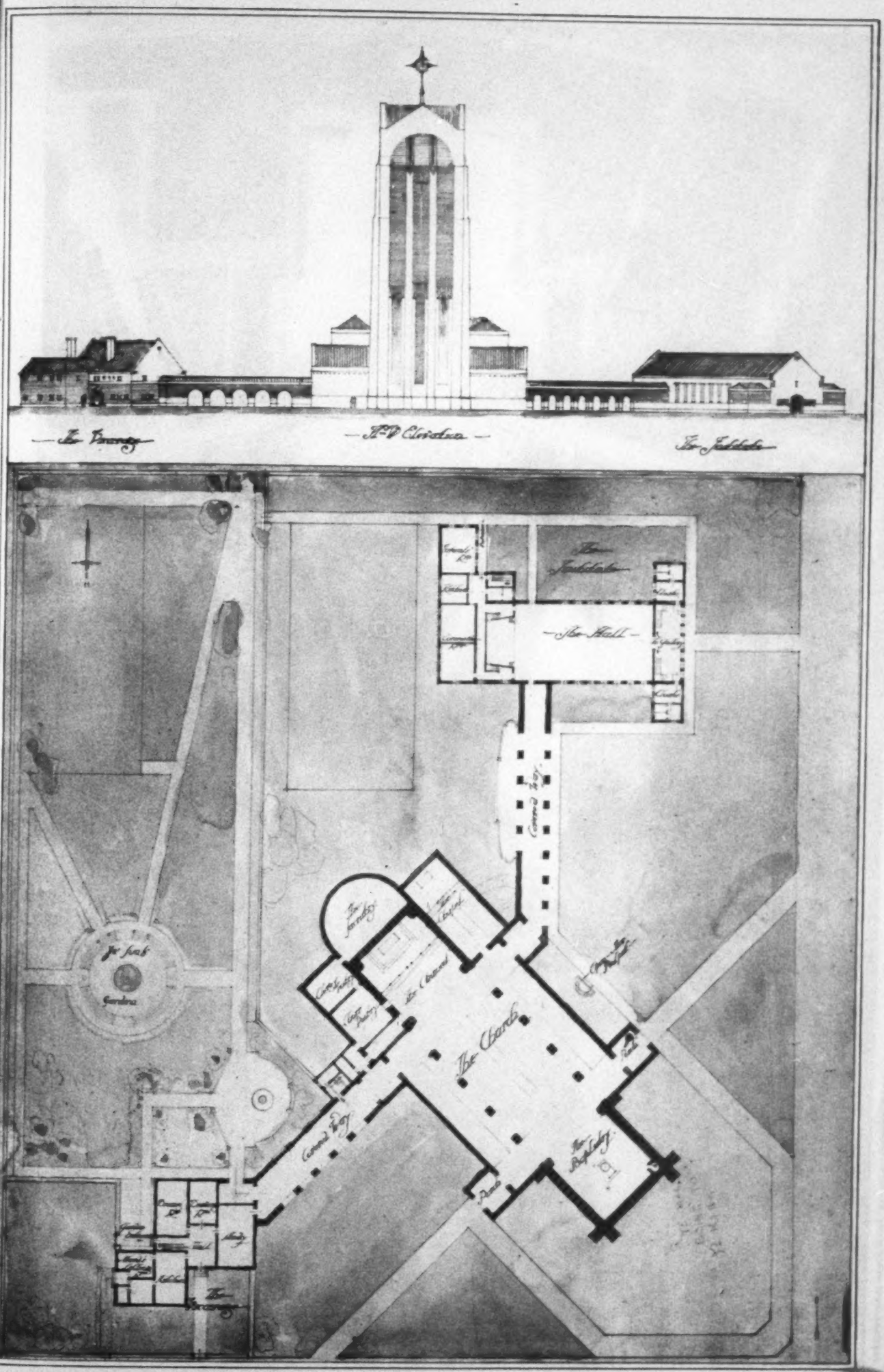


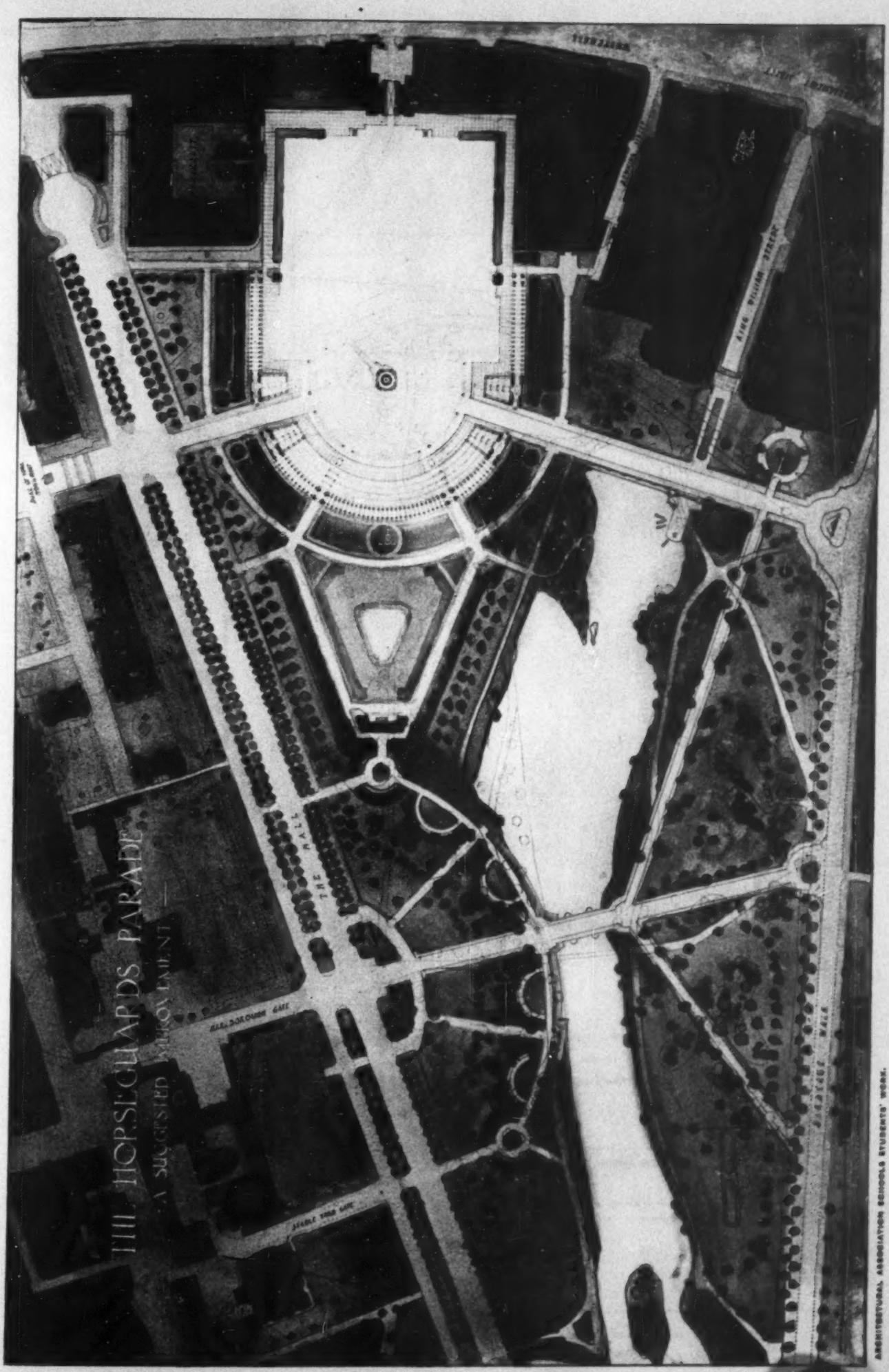
...URAL ASSOCIATION SCHOOLS STUDENTS' WORK.

AN ITALIAN RENAISSANCE COMPOSITION. BY MR. THA TUN (SECOND YEAR STUDENT).



ARCHITECTURAL ASSOCIATION SCHOOLS STUDENTS' WORK.

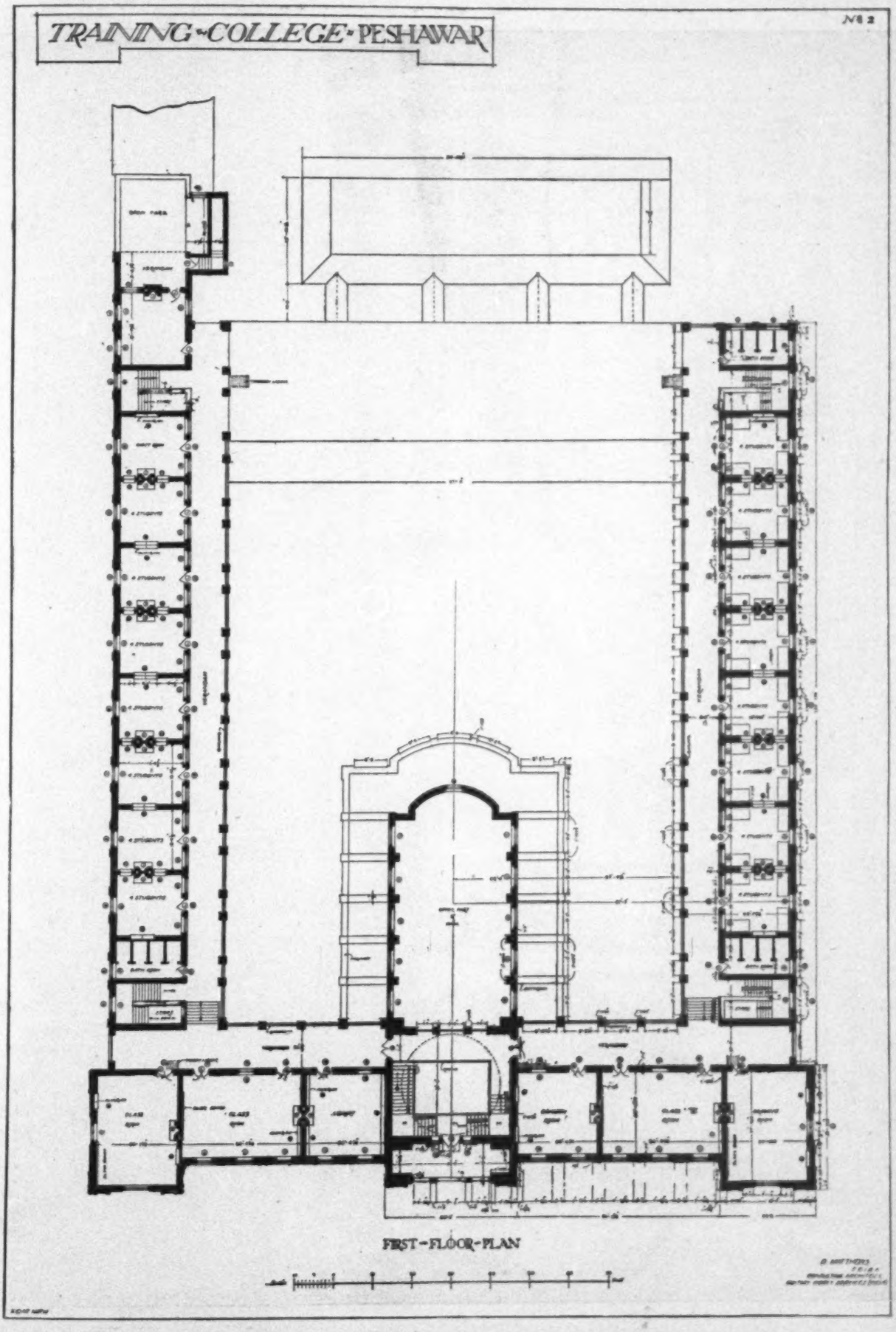
DESIGN FOR A CHURCH AND INSTITUTE. By Miss I. J. Macfadyen (third year student).



A DEVELOPMENT SCHEME FOR HORSE GUARDS PARADE (TOWN PLANNING SUBJECT).

By Mr. E. U. Channon (Fifth Year Student).

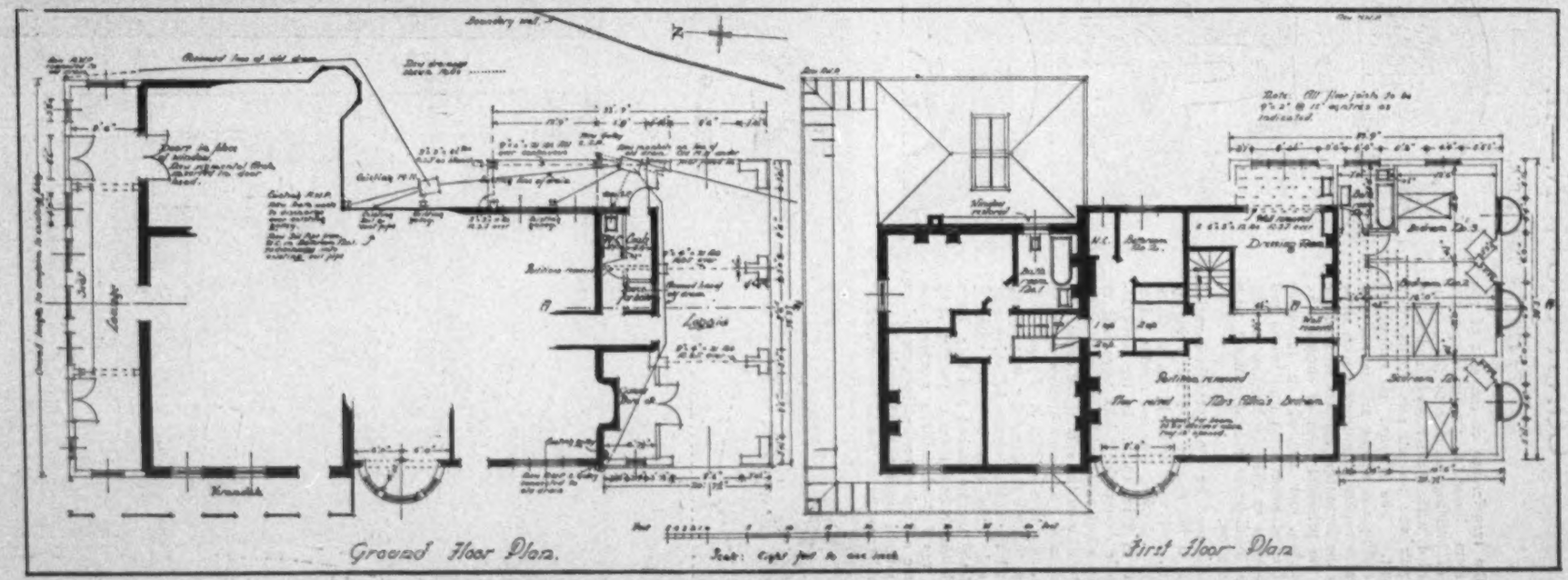
Architectural Association Schools Students' Work.



Mr. B. Matthews, F.R.I.B.A., Consulting Architect for Military Works in India. (*See p.* 323.)

Design for a Concert Hall and Seaside Lay-Out. By Mr. E. Wamsley Lewis (Third-Year Student.) (*See p.* 323.)

Architectural Association Students' Work.



No. 39, Circus Road, St. John's Wood. MESSRS. BENNETT & HOSSACK, Architects

[This is an early nineteenth-century house in stucco with a characteristic verandah and trellis. It was added to some few years ago, and in this latest work three extra bedrooms and a loggia, a lounge, and a circular bay window are to be added. An effort has been made to keep the simple lines, which are part of the character of houses of this period, and to make an addition which would give a good plan as well as provide the extra accommodation. The work will be carried out in stucco and tiles for the elevation and with brick paving for the loggia, while the remaining materials will as far as possible match the existing. The builders will be Messrs. John Marsland & Sons, Ltd., of South Molton-street].

THE DOME: ITS HISTORY AND CONSTRUCTION.—II.

BY SIDNEY TOY, F.S.A.

WITH the transference of the seat of the Empire from Rome to Constantinople the problems of building peculiar to the Levant were assailed with greater zeal, and a renewed vigour was infused into architectural development. The Levant is subject to frequent earthquake shocks and is not well provided with timber. Confronted with these difficulties the Byzantine builders selected the dome as the principal form of covering for their churches, and devised an ingenious method of construction with thin bricks and thick bed-joints so that in building it they were able to dispense almost entirely with timber centering.

The bricks used by the Byzantines varied from 1 ft. 2 in. square to 2 ft. 3 in. by 1 ft. 4 in., and were from 1¼ in. to 2 in. thick; they were laid between mortar joints from 1 in. to 2 in. thick. In the construction of their domes the bricks were laid in successive conical rings with beds converging towards a centre on the axis of the dome, this centre gradually rising as the rings approach the crown, as shown in Fig. 5. As each ring was set a thick bed of mortar was spread upon it and the bricks of the following ring were placed upon this bed, the adhesive quality of the mortar in bed and side joints being sufficient to hold them in position until the ring was formed. When complete the ring became a kind of conical key, its bricks receiving mutual support, as shown in Fig. 6, and no timber centering would be required.

FIG 9

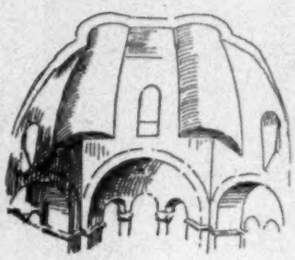


FIG 10

FIG 11

The construction of the crown presented a difficulty since the tendency of the bricks to fall inwards before the ring to which they belonged was complete increased the nearer the summit was approached. The Persian and Arabian builders met this difficulty by deflecting the intrados upwards beyond the haunches and finishing the dome with a conical crown, as shown in Fig. 7. In some small Byzantine examples the contour is broken at the haunches, a secondary cupola formed, and the crown finally finished with a disc of masonry previously built on a platform, as in Fig. 8. The Byzantine builders, however, generally completed their domes in a spherical form and probably used a small wood centre for the brickwork at the crown. To counteract the lateral thrust and convert this thrust into a vertical pressure a mass of masonry or brickwork was built round the base of the dome and carried to the height of the haunches, as shown in Fig. 5; and in the early examples of Byzantine work, as at S. Sophia, Constantinople (Fig. 9), windows are pierced through this mass.

The Byzantine dome is often strengthened by ribs which, in the early examples, were built and bonded with the general brickwork of the shell. In the dome of S. Sophia, Constantinople, dating from A.D. 562, forty ribs spring from the base, where they are 3 ft. 3 in. wide, and converge towards the crown (Fig. 9). At their springing the projection of these ribs is only 6 in., while at the crown they die into the general surface some distance from the summit. Ribs were sometimes formed by imparting a scalloped shape to the dome itself, as at SS. Sergius and Bacchus (Fig. 10), and in the dome of the inner narthex at S. Saviour in the Chora, both at Constantinople, and both dating from

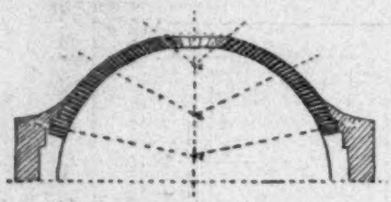


FIG. 5

FIG 6

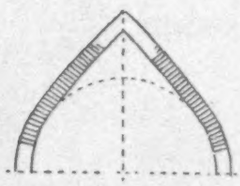


FIG 7

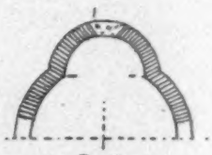


FIG 8

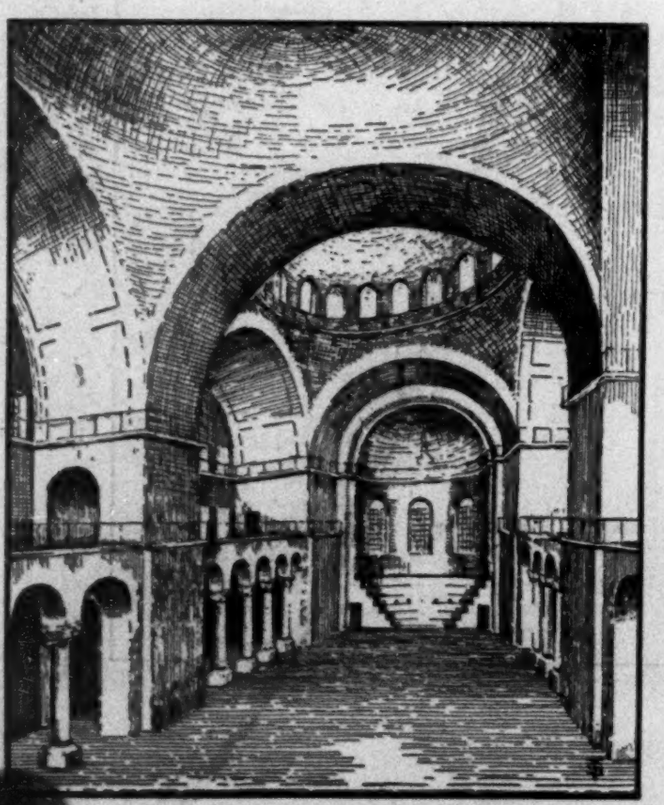


Fig. 16.—Church of St. Irene, Constantinople.

Fig. 20.—S. Sophia, Salonika.

Fig 12.

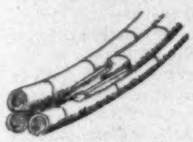


Fig 13

Fig. 14.

Fig 15.

the first half of the sixth century. In the former case the scallops were doubtless designed primarily as a convenient form to superimpose on the octagonal base of the structure. At later periods ribs became merely decorative features built of bricks not bonded with the general material.

In the small dome of the tomb of S. Demetrius, Salonica, dating probably from the fifth century, the brickwork is composed of discharging arches, juxtaposed and built in tiers forming a series of fan-shaped figures. This disposition was adopted about two hundred years before in the round temple at Spalato, and illustrated in Fig. 11. Some domes, as that of S. Pantelemon, Mt. Athos, were constructed of rings of interlocked pantiles set in mortar, each ring thus forming a non-expansible tie, as shown in Fig. 12. At Ravenna terra-cotta tubes, set in mortar and disposed as shown in Fig. 13, were extensively used. These tubes were interlocked and formed into spiral coils which encircled the dome from its base to its crown, and by this means a very light dome was constructed in which the effect of thrust was overcome within the shell itself. The dome of S. Vitale, Ravenna, dating from 547, is built in this manner.

The Roman dome was usually constructed on a circular base, and arose directly from that base, as at the Pantheon at Rome, but when it was desired to apply this method of vaulting to a polygonal or square space, such as formed the central portion and not the whole of a building, some manner of supporting the circular dome across the angles had to be devised. At the temple of Minerva Medica triangular shaped corbels were employed, and in the tombs of the Via Palestrina tentative expedients of a similar character are observed, but the problem was scientifically solved by the Byzantine architects, who designed and built the true pendentive.

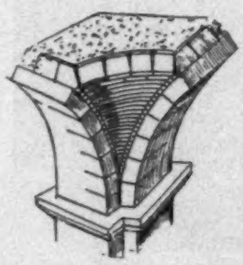


Fig. 23.

The surfaces of the pendentives were spherical and may be represented by the remaining surfaces of a hemisphere when cut vertically on the planes of a square drawn within the base and horizontally at the level of the summits of these vertical sections, as shown in Fig. 14. The vertical sections represent the planes of the four arches enclosing the space to be covered and the horizontal section the base of the dome itself (Fig. 15). In the western dome of S. Irene, Constantinople (Fig. 16), the pendentives and dome form parts of the same sphere, as indicated by the dotted line in Fig. 15, but this construction was usually confined to small compartments not lighted by the dome itself. The pendentives were constructed with conical rings of brickwork in a manner similar to that employed in building the domes, but a difficulty was presented by their oblique junction with the transverse arches, as shown in Fig. 17. Occasionally the courses were built as shown in Fig. 18, from S. Sophia, Salonica; or disposed as in Fig. 19, from S. Mark's, Venice; but in both these cases the resulting base for the dome is deformed, as illustrated by the dotted lines on Figs. 18 and 19, and seen clearly in Figs. 20 and 21.

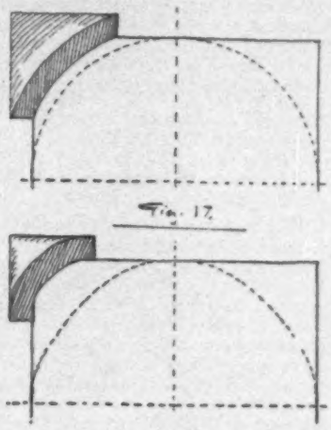


Fig. 17.

Fig. 18

Fig. 19.

Fig. 22.

When the true spherical form was followed chamfered voussoirs were often placed on the arches to receive the ends of the pendentive rings, as shown in Figs. 22 and 23. The backs of the pendentives behind the rings were always filled in with a kind of rubble or brick concrete.

Fig. 21.—Church of S. Mark, Venice.

BOOK REVIEWS.

Historic Streets of London. An Alphabetical Handbook. Compiled and edited by Lilian and Ashmore Russan. (London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd. Price 3s. 6d. net).

To quote the editors' introductory note: "The book is what it pretends to be—a compilation, an index, a handbook, a ready reference, for which many colonials, provincials, and foreigners, not to mention Londoners, may hold us in esteem." To those who have known the pleasure of holidays in London in the company of some good friend competent to be their guide to its many points of historical interest the handbook brought out by Lilian and Ashmore Russan will call back many happy memories, and for those who have not yet experienced the charm of London streets the information they have so carefully collected will open up a store of good things.

It is of the utmost interest to learn the connection of the great men of the past with the streets of the capital city of the Empire, and in this book, under the name of each street, is given sufficient information to captivate the reader and to direct his further study by reference to the authorities. The probable meaning or derivation of street names has been given in several doubtful cases, and it is interesting to read that Birdcage-walk was probably so called originally and is not a corruption of the French word Bosquet, a clump of trees, as is sometimes stated. "Birdcage-walk, St. James's Park (S.W.1), named from the Aviary established there in the reign of James I, and the Decoy made there in the reign of Charles II (Timb's 'Curiosities of London,' p. 15)."

The names of the more famous streets are associated with brief summaries of the chief persons and events, but owing to the limits of space these lists are not always so long as the facts would warrant, for some London streets have been the haunt of great men of several generations. As the editors admit, "the book might easily have been extended to three times the size such is the wealth of material." They have constrained themselves, however, to keep the volume within dimensions which allow of it being carried in a pocket or in a lady's handbag. Within these limits it is admirable, but the pruning has had to be severe. Bankside, for instance, is rightly associated with Shakespeare and the early theatres, but it might be asked why Sir Christopher Wren's connection with the spot is ignored since it was from his house in Bankside that this great man, who has been proclaimed "the builder of this city," was able to watch the growth of its cathedral church as it was being erected to his design. The note on Westminster Hall, too, obviously suffers from undue brevity since the roof erected by Richard II, one of the wonders not only of London, but of the whole field of mediæval construction, receives no mention. The reproduction of old maps and views from the Goss collection by way of illustration is appropriate, though it may be regretted that the charming picture of Old London Bridge, with its many-storied mansions, is not accompanied by any explanatory reference in the text.

Structural Drafting and Design of Details. By Carlton Thomas Bishop. 2nd edition. (New York: John Wiley & Sons, Inc. London: Chapman & Hall, Ltd. Price 25s. net.)

This book is a new edition revised to suit the changes in the standards of the Association of American Steel Manufacturers. It is produced in good, well printed style, with valuable detailed diagrams. It does not leave essential points to rule of thumb methods, or avoid them, as so many treatises published in this country have done. The drawings and examples given for all kinds of constructional engineering work cannot fail to prove of use for reference to any engaged on this class of work. If many of the rules mentioned in connection with working drawings were adopted wholly or in part by many drawing offices, much confusion and many mistakes would be avoided.

But as this work is intended principally for the apprentice draughtsman and student, it ought to be pointed out that it does not help very much in its practical chapters, as distinct from those dealing with design, those students attempting to grasp the way in which work is detailed and put into the constructional shops in this country. It is essentially concerned with American methods and designing, shop practice and procedure. Except for one or two notable exceptions, British constructional engineers do not follow what is known as the American system of detailing. The tables given are, naturally, based on American profiles, specifications and loadings and, of course, cannot be of great utility in this country where the sections are those of the British Engineering Standards' Association, the specifications those of British authorities based on the British Standard specification, and the loadings those prescribed by some particular railway or British firm of engineers.

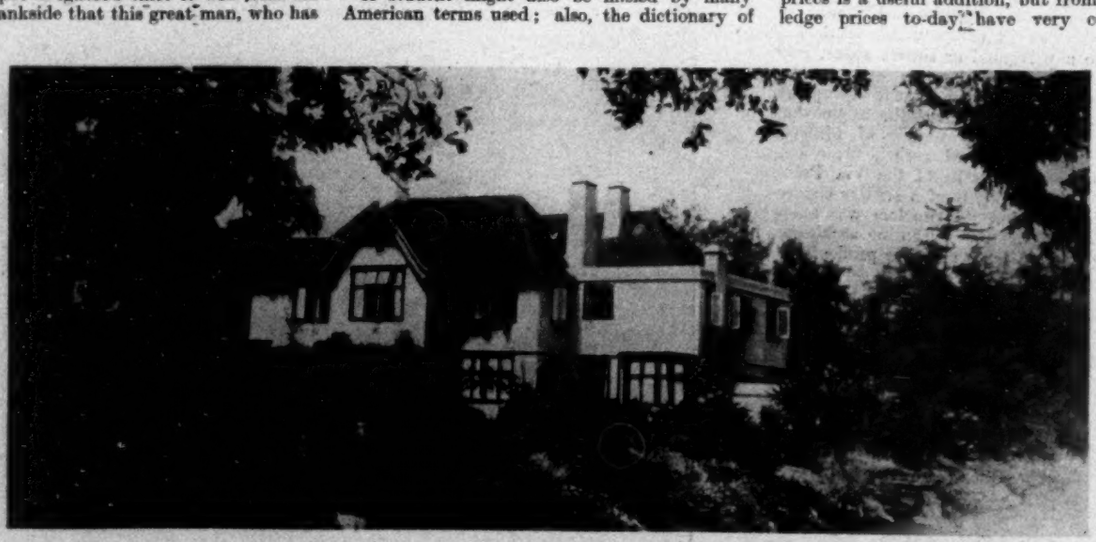
A student might also be misled by many American terms used; also, the dictionary of definitions is by no means of general application in this country. To take examples. What is understood amongst steel erectors in this country as a derrick is described as a gin pole, whilst a derrick itself is described as "a hoisting machine so pivoted that a load may be swung horizontally." Camber is described as a curve in the bottom chord to prevent sag. Camber, as we understand it, applies to the whole girder, whose depth is maintained. Similarly in regard to notation adopted. What is known as the L.C.C. Notation is now more generally used in this country. The book under review uses a notation so similar, and yet so different, as to be misleading. Some symbols used are identical with the L.C.C., some have similar meanings, and many entirely different meanings.

Dealing with the manufacture of structural steel, it is stated that this "is made by the open hearth process." Whilst no doubt there is a lot to be said for this, this limitation is by no means so definitely prescribed by the British standard specification for structural steel. Design is not gone into very fully, only so far as the design of details and simpler members of a structure is concerned, with which it is deemed imperative that the production, or works' draughtsman, should be familiar. Such notes as there are on design are good, and the chapters dealing with the design of rivet spacing and joints can be particularly commended.

The book is an excellent work in many ways for those American students for whom it is primarily intended—and for British students, too, provided they can keep in mind that it is American practice which they are studying. The book emphasises more than ever the necessity of more up-to-date British literature dealing with similar points from the standpoint of British practice, British loading standards, profiles, &c.

A B C of Collecting Old English Pottery. By J. F. Blackler. Fourth edition. (Stanley Paul & Co., 15s. net.)

The fourth edition of this work will receive a warm welcome from the collector and those possessing family pieces, enabling them on account of the numerous illustrations (some 450 in half-tone and line) to identify their pieces. The volume gives a general history of English pottery from the earliest period and, in addition, mentions some two hundred potters' names. The owners of some fine specimens of pottery have placed them at the disposal of the author, enabling him to illustrate many fine and unusual specimens. An appendix of prices is a useful addition, but from our knowledge prices to-day have very considerably



"Coteroft," Kelvedon. Mr. F. Sidney Webber, Architect.

[This residence, near Kelvedon, Essex, was recently completed from designs by Mr. F. Sidney Webber, Lic.R.I.B.A., of Blackheath, S.E.3. The building has been erected in local bricks and rough-cast, with bays and dressings in stone. The roofs are covered with handmade red tiles. Electric light generating plant and central heating have been provided. The general contractors were Messrs. Holland & Hannen and Cubitts, Ltd., Bloomsbury, W.C.]

increased since the latest date mentioned, viz., 1909.

The Decoration and Renovation of the Home. By ARTHUR SEYMOUR JENNINGS. (London: W. R. Howell & Co. Price £2 2s. net.)

We have nothing but praise for this work as a practical book on painting and decorating. In the matter of design, however, it is by no means so satisfactory. This defect we have had occasion to note before in reviewing Mr. Jennings' works. The designs seem altogether to be out of touch with modern ideas of internal decoration; they are reminiscent of the work of twenty years ago, and not even very good speci ens of that period. As for some of the decorative details, they remind us frankly of the worst periods of the "nouveau art" movement.

Apart from these defects, the book is full of valuable information. It contains a collection of coloured plates suggesting various colour schemes for wall surfaces; in all eighty-nine are given, and they are executed with the actual paints and not by any reproduction process. The book deals also in addition to wall painting in all its branches, with varnishing, enamelling, and various wood finishes.

A very useful chapter for the amateur—and the book is designed to appeal to him—is that which gives a selection of the questions which have been addressed to the author at various times by persons seeking information. Each question is followed by its proper answer, and many householders will find here a remedy for their particular trouble. To the architect the chapter which gives some recipes for paint mixing will be more useful. The student will appreciate the illustrated glossary.

"Cotcroft," Kelvedon: Drawing Room
MR. F. SIDNEY WEBBER, Architect. (*See p.* 332.)

The House-Owner's Book. By ALLEN L. CHURCHILL and LEONARD WICKENDEN. (Funk & Wagnalls Co., New York and London: 1922. Price 8s. 6d. net.)

The book is addressed to the non-technical reader, and aims at increasing the house-owner's interest in and knowledge of his property. The financial aspect of house-owning is first touched upon. House property may not be always a wise speculation, but a person owning the house he lives in does not regard the proposition entirely as a case of possible profit or loss.

For those who cannot command sufficient capital to build a home for themselves the alternative methods of mortgages and association in a mutual building society are described with the general proviso: "It is a safe plan to follow that one should not pay out money, or enter into a contract, for the purchase of property or the building of a home without proper legal advice. . . . The contract with the builder should be carefully scrutinised by a lawyer, in order to avoid misunderstanding and difficulties and to make sure that one's rights and interests are fully protected."

The architect, however, is not mentioned, and the important subjects of selection of site, aspect and exposure are passed over in silence. The vital importance to the householder, whether he be owner or tenant, of having a house planned in relation to the great primary, the sun, is too frequently ignored both in America and in Britain, yet no daintiness of architectural trimming can redeem a house that is condemned to gloom and icy draughts through lack of attention to what should be fundamental matters of design.

The chapters on materials are somewhat fuller in detail, but to the English reader there seems something quaint in the desire to learn building construction for the reason indicated in the following passage:—"Should you be building, or about to build, a house of brick, it is probable that at some time your architect or your builder will begin to talk impressively of 'English bond,' of 'stretchers,' and 'headers,' and 'bats.' There is no reason at all why you should not surprise them and gain their increased respect by letting them know that YOU know exactly what they are talking about."

American readers will sympathise with the point of view more readily than English, who will be more interested in the special appliances, the home refrigerating apparatus, the garbage incinerator and the vacuum cleaner equipment. The American love for refined exterior finish at all costs appears again in the paragraph on "Hiding the Radiator," and the statement that "with a properly designed radiator enclosure, the loss of heat is very small" is not generally accepted by heating engineers. The advice to hide radiators behind "what is, apparently, a book-case with leaded glass doors, or beneath a charming window seat," &c., will be regarded with horror by architectural purists and even the most catholic-minded will recognise that this is not the way to solve an æsthetic problem. Efficiency of function of any installation should be considered together with its artistic expression, and for success in one direction alone is insufficient.

A chapter on "Safety in the Household" contains a great deal of sound advice, and the book includes a collection of tables useful to the American house-owner.

The Golden Hind. (Chapman & Hall, Ltd. 6s. net.)

A quarterly magazine of art and literature, this magazine contains many weird and fantastic drawings, some distinctly German in character, others of the Aubrey Beardsley school. The lithographs are the most appealing, notably those by Walter Spradbery, Grace Rogers, Austin O. Spare, and E. A. Cox. Of the woodcuts, that by Robert Gibbings is worthy of mention. The literary contributions are by Messrs. H. J. Birnstingl, Rabindrath Tagore, Clifford Bax, and others.

Mechanics. Part 1. By Thompson & Leslie. (London: Cassell & Co. 2s. net.)

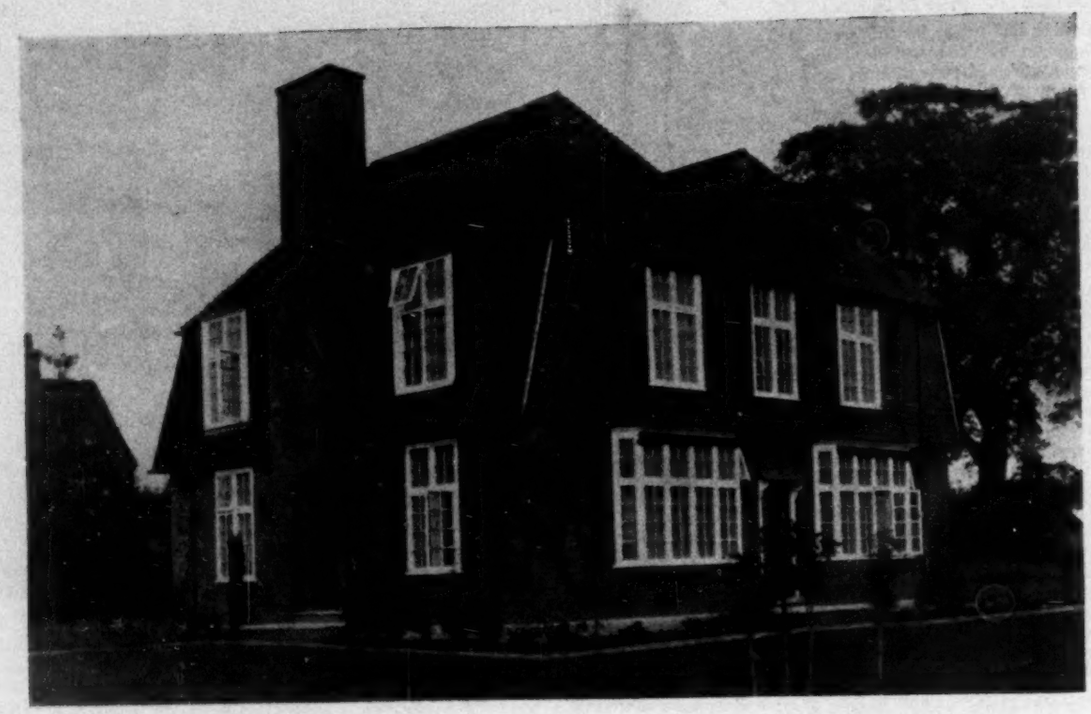
Elementary mechanics is a very well worn subject, but the authors have succeeded in putting life into the dry bones of this important branch of physics in a manner with which the publisher's elementary text-books have come to be associated. The unconventional character of the book will be evident from the fact that after an introduction on materials, stresses and strains are dealt with, and the uses of various trusses is simply explained. Friction, economic and uneconomic, is illustrated by various driving and clutch diagrams. An account of the lever principle is followed by a chapter on machines illustrating its use. The last third of the book is occupied with pneumatics and hydrostatics. Containing 142 illustrations, diagrammatic and photographic, the book should prove an attractive addition to the publishers' library of applied science, and its very reasonable price should make it available for a wide range of readers.

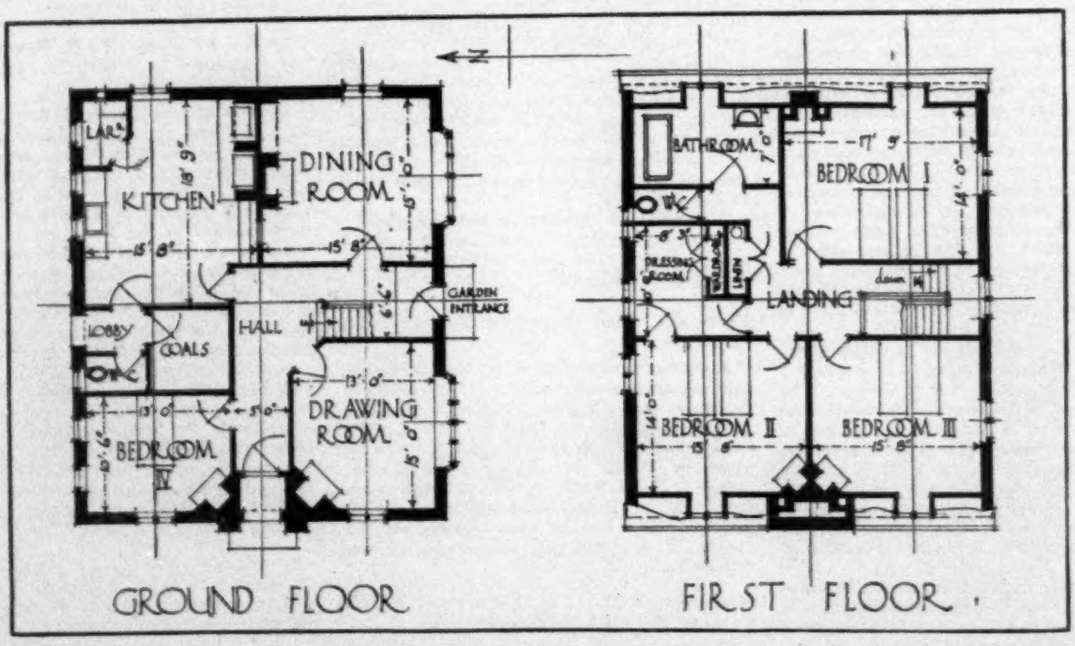
The House Doctor. By R. RANDAL PHILLIPS. (London: 20, Tavistock-street, W.C.2. Price 2s. 6d. net.)

This is a small manual describing everyday jobs and repairs in the home, such as replacing defective washers, sash-lines, and fuses, recovering chairs, and fitting up electric bells. It includes a list of trade preparations, and proprietary articles are also freely recommended in the text. Some of the processes dealt with are of doubtful value, as, for example, the repairing of an old Staffordshire jug by moulding a new lip and painting the design on it with water colour varnished to imitate the glaze. In regard to wall treatment we read that "wall papering involves many difficulties," to which it might be added that the inexperienced amateur who tries to paper his own wall is rightly given a place beside the kipper and the mother-in-law among classical music-hall jokes. The average householder would find this book useful in giving him an idea of those jobs that should easily be done by anyone of intelligence without the aid of an expert.

The Old-World Galleries A B C History of English Antique Furniture. By STANLEY BARRETT, F.S.Arc., L.R.I.B.A. Second edition. (London: The Old-World Galleries, Ltd. Price 1s. 6d. net.)

This is a handy little volume on old furniture, giving much valuable information in a condensed form, and a useful table of dates and periods. The volume also has notes on blue and white Staffordshire pottery with a list of makers and dates. Numerous illustrations of the various periods are shown and the approximate prices appended, a detail so essential to those anticipating furnishing with old furniture. Pieces suitable for a week-end cottage or a mansion are included.





"Oak Knoll," Beaconsfield.

Messrs. Burgess, Holden & Watson, Architects

['This house was built in 1921. A feature, which was specially desired, is the roomy kitchen accommodation combining kitchen and scullery in one, and making, at the same time, a comfortable maids' sitting-room. The house is built with 11 in. cavity walls faced with red bricks of varied colour. The roof is covered with hand-made tiles, and the external woodwork painted white. The architects were Messrs. Burgess, Holden & Watson of 13, Gray's Inn-square, W.C.1, and Beaconsfield.]

LEGAL SECTION.

NOTES ON CURRENT CASES.

Sub-Letting : Consent.

A DECISION of the Privy Council on covenants not to sublet without consent in the case of Fullers Theatre & Vaudeville Co., Ltd., *v.* Rofe (1923 A.C. 435) may be noted.

The respondent Rofe was the lessee of certain premises, the lessors being the Municipal Council of Sydney, and the lease under which he held the property (which we shall call the "headlease") contained most onerous covenants. In addition to covenants to pay the rent reserved, to repair and paint, it contained a covenant the breach of which it was specifically provided could not be remedied, namely, that the lessee would not assign or sublet the whole or any part of the premises without the consent of the Council in writing first obtained; and, also, a covenant as to the uses to which the premises must not be put by the lessee. The respondent had demised part of the premises to the appellants, and it is the sublease of this part of the premises which alone is relevant to the point raised and decided in this case. This lease, after defining the term "rent," &c., contained first a covenant by the lessees that they would not (with an immaterial exception) assign or sublet the whole or any part of the premises without the consent in writing of the lessor, the respondent, and the Council first had been obtained; and, second, a covenant that the lessees "will not use or permit the buildings and demised premises to be used for any purpose other than one of the purposes mentioned in" the headlease. But at the end of this lease there was a covenant by the lessor which was as follows: "The said T. E. Rofe hereby covenants for himself, his executors, administrators and assigns that so long as the City Council of Sydney raises no objection to an assignment or assignments, or subletting or sublettings of the demised premises, or any part thereof, the said lessor will not object to any such assignment or subletting."

To understand the points raised, we may quote two statements from the judgment delivered by the Privy Council. The first is, "Having regard to these onerous covenants and conditions, it was obviously of vital interest and importance to Mr. Rofe that in case the demised premises or any part of them should be sublet, the sublessee should be firmly bound to perform all the covenants by the lessee contained in this headlease since the breach of any one of them might at the will of the Council work a forfeiture of the headlease. And this would be all the more necessary since it is well established that no privity of contract or estate would exist between the lessor, the Council, and such a sublessee." The second passage is: "It is well established by the following authorities, amongst others, namely, Treloar *v.* Bigge (L.R. 9 Ex 151); Sear *v.* House Property & Investment Society (1880 16 Ch. D. 387); Barrow *v.* Isaacs & Son (1891 1 Q.B. 417); Eastern Telegraph Co. *v.* Dent (1899 1 Q.B. 385); that if one finds in a lease a covenant by the lessee not to assign or sublet the demised premises without the consent in writing of the lessor first had and obtained, and also a covenant by the lessor that he will not unreasonably withhold his consent to a subletting or such like, the two covenants must be construed together, with the result that the covenant by the lessee will be held to be qualified by that of the lessor."

If any of the prohibited trades were carried on on the premises the respondent might have his own lease, the headlease, forfeited. Now, the appellants desired to grant a sublease to three named persons, and their solicitors wrote to the respondent asking for his consent in writing. They informed him that the term of the sublease was to be ten years, and what the rent was to be, but no information was given as to the contents of the lease, nothing as to its date, the time from which it was to run, or the purposes for which the demised premises were to be used. They, however, stated that the Council had consented to the sublease, but gave no indication as to the character of that consent, whether it was a mere bald consent. Application was made for the form of the lease, but the appellants did not comply, their view being expressed in a letter from their solicitor that, so long as the approval of the Council was obtained, the respondent's consent was unnecessary. In this they relied upon the clause in the lease to them set out above as to the consent of the Council. It was not until the sublease had been executed and was no longer held as an escrow that a copy was forwarded to the respondent. In the action, the respondent was claiming to re-enter for breach of covenant, and the Privy Council, affirming the two courts in New South Wales, held that the respondent was entitled to succeed in the action as he had not been guilty of any breach of the lessor's covenant; he had not refused to give his consent to the sublease; he had not raised any objection to the subletting as such, but had only asked for information which on every principle he was entitled to, namely, such information as would enable him to ascertain what was the precise nature of the thing he was asked to do.

A second point was relied upon by the appellant, viz., that the breach of covenant had been waived by a receipt of rent after breach with the respondent's knowledge of the breach. It was not until July 28, 1921, that the lessor received the copy of the sublease, and was definitely informed that it had been executed. The last receipt for rent was dated July 27, and that and former receipts bore an endorsement: "Without prejudice to the rights of the lessor under the lease." The Privy Council held that the appeal failed on this point also, and that there had been no waiver, approving the decision Mathews *v.* Smallwood (1910, 1 Ch. 777). We have often in these pages dealt with this question of waiver, but we may again quote two passages from Mathews *v.* Smallwood, which were specially approved by the Privy Council in this case. "Waiver of a right of re-entry can only occur where the lessor, with knowledge of the facts upon which his right to re-enter arises, does some unequivocal act recognising the continued existence of the lease. It is not enough that he should do the act which recognises, or appears to recognise, the continued existence of the lease, unless at the time when the act is done he has knowledge of the facts under which or from which his right of re-entry arose." Then, as regards onus, "The question whether there has been a waiver in such a case is one of law, and the onus is on the lessee to adduce some evidence of the lessor's knowledge, and proof of an act showing a recognition of the tenancy does not throw the onus of proving want of knowledge on the lessor." We may point out that the compliment of the first rule set out above that waiver of a right of re-entry can only occur where the lessor, with full knowledge of the facts upon which such right depends, does some unequivocal act recognising a continuance of the lease, seems contained in the case Elliott *v.* Boynton, which we noted in our Legal Section on July 27, where it was laid down also that a receipt of rent after the landlord has unequivocally shown his determination to determine the lease for breach of covenant does not operate as a waiver.

Specific Performance : Statute of Frauds.

There have been an unusual number of cases lately turning upon what is a sufficient memorandum in writing upon the sale of an interest in land to satisfy the Statute of Frauds. The latest case is Koenigsblatt *v.* Sweet (*Weekly Notes*, June 23). The vendor in that case, who was the defendant, had signed a contract, but left certain blanks in it, and had left it with his agent to be handed over as one part of a contract in writing for the sale of land to the plaintiffs, a man and his wife, in exchange for a similar document signed by them, the agent having authority to fill in the blanks. The agent filled in the blanks he was authorised to do, but he also struck out the name of one of the two purchasers, thus exceeding his authority, as he was only authorised by the defendant to accept the offer made by the plaintiff to purchase the property on the same terms as it had been offered to the plaintiff and his wife. The defendant, however, ratified the act of the agent, and the ratification was to date back to the time when the act was done.

In an action by the plaintiff for specific performance the defendant contended (1) that no binding contract had been originally made, as the agent had no authority to contract with one purchaser alone, and (2), even if the defendant had ratified the agent's act, new terms by that ratification were introduced into the original contract and this would make a new contract, and to that new contract there was no signature by the person to be charged to satisfy the Statute of Frauds as the old contract was the only one he had signed. The judgments of the Courts are at present too briefly reported for us to give the reasoning upon which the judgments were based. The report only states that the Court below held that the Statute of Frauds raised no difficulties, as the plaintiff was suing on an agreement in writing signed by the parties, and the plaintiff was entitled to an order for specific performance on the footing of the title having been accepted, and that the Court of Appeal dismissed the appeal without calling upon counsel for the respondent, the plaintiff. Section 4 of the Statute of Frauds, so far as it is relevent to this case, provides that no action shall be brought upon any contract or sale of lands, tenements, or hereditaments, or any interest in or concerning them, unless the agreement upon which such action is brought or some memorandum or note thereof shall be in writing and signed by the party to be charged therewith, or some other person thereunto by him lawfully authorised. Apparently the Courts must have considered, therefore, that the agreement or contract in this case and signed by the defendant had been duly ratified by the defendant at all material times and represented the contract sued upon.

Agreements in Restraint of Trade.

The decision which we noted in our Legal Section June 29, in the case of H. J. Willett *v.* Beasley, has been reversed on appeal. It will be remembered that the plaintiffs, who carried on business as agents for Ford cars at Colchester, were seeking to enforce an agreement as against a late employee, which, *inter alia*, provided that he should not at any time during the period of five years after the determination of his employment "undertake or carry on or be engaged or directly or indirectly concerned or interested in any branch of the motor business at any place within a radius of fifty miles from the Town Hall, Colchester." The Court below had upheld this agreement, as noted in our article.

The Court of Appeal reversed the judgment of the Court below. The Court referred to passages in Mason *v.* Provident Clothing Company (1913, A.C. 724), and Attwood *v.* Lamont (1920, 3 K.B. 571), and held that the covenant was too wide in two respects—the class of business and the area. The Court held that the words "any branch of the motor business" might include the assembling of parts, the manufacture of cars, or the building of motor boats, and were too wide for the protection of the business in question, whilst the area was also too wide, for it could not be said that it was necessary for an agent in this class of business to be protected over an area of fifty miles which covered part of London. Lord Justice Bankes is reported as having said that those who drew these agreements should not insert a specified area without considering whether it could reasonably be supported.

THE EFFECTS OF CEMENT CONTENTS ON CONCRETE.

AT a recent meeting of the Institution of Structural Engineers Dr. Oscar Faber, O.B.E., D.Sc., read a paper on "Experiments on Concrete of Different Cement Contents."

The paper was divided into Parts I, II, and III, from which we take the following extracts:—

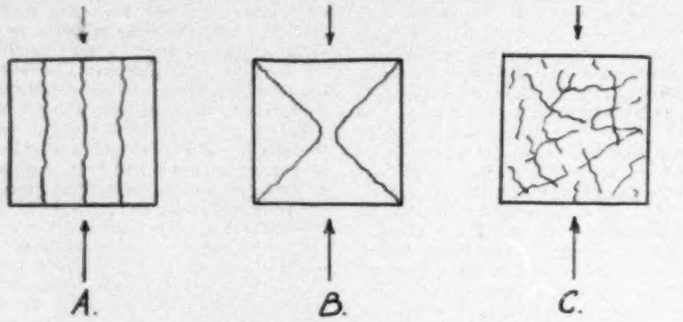

A.
B.
C.
FAILURE OF RICH CONCRETE 90% TO 100% CEMENT
FAILURE OF MEDIUM CONCRETE 30% TO 70% CEMENT
FAILURE OF POOR CONCRETE 10% TO 20% CEMENT & LESS

FIG 1.

PART I.

In connection with some work requiring rich concrete, the lecturer some time ago wanted definite experimental results as to how the properties of concrete were affected by varying the cement contents, and could find only isolated and unrelated tests, which, moreover, agreed but poorly with one another. He therefore determined to make a thorough and careful series of tests, in which cubes were made with 10 per cent., 20 per cent., 30 per cent., etc., up to 100 per cent. of cement, with careful measurements of weights of all the ingredients sufficient to furnish data as to weight of concrete, shrinkage of materials, quantities of material required, crushing strength, etc.

Such a series was made in August and September, 1922, and the quantity of water was left to the operator to find by trial, the resultant wetness to be controlled by a slump-test so as to obtain uniform wetness with all mixtures. It was found, however, that in spite of considerable care the results were very variable and bore strong internal evidence of unreliability, which was traced to variations in water content, which, of course, has a predominatory effect on strength of concrete. In other words, it was not found practicable, by means of leaving it to the discretion of the operator, assisted (or perhaps hampered) by a slump-test machine, to get the water contents sufficiently uniform in the various tests to obtain really uniformly varying results having strong internal evidence of reliability and consistency.

A second series was therefore undertaken, in which the water content of each mixture was carefully regulated according to a formula which had been designed to give uniform wetness to both rich and poor mixtures. Even though it was subsequently found that this formula could be improved on slightly, the second series did produce the instructive and reliable results hoped for.

In order to obtain really accurate proportions of cement, sand, and ballast it was found necessary to measure these by weight and not by volume, and it may be pointed out that the same cement can give variations in volume corresponding to a variation of from 90 to 60 lb. a cu. ft., depending solely on whether it be loosely packed or consolidated, and that a given measure filled with cement from a sack will give widely varying weights, and that clearly under such conditions no consistent results could be anticipated if the quantities were measured by volume. The same argument applies to sand and ballast, but to a much smaller extent.

In this series of experiments the ratio of sand to ballast was kept as 1 is to 2 throughout all the mixtures. The sand used was washed Ham River grit (a clean siliceous sand), and ¾-in crushed Ham River ballast.

Throughout the tests a 10 per cent. cement contents means that the weight of cement shall be 10 per cent. of the total weight of *dry materials* (cement, sand, and ballast); from which it follows that the sand and ballast would be 90 per cent., and since the sand is to be half the ballast, the sand would be 30 per cent., and the ballast 60 per cent., of the total weight of dry materials.

The cement percentage might have been taken as the percentage of the weight of *all materials* (cement, sand, ballast, and water), but this would conform less to usual parlance of the industry.

The water content was calculated by taking 25 per cent. by weight of the cement plus 5 per cent. by weight of sand and ballast. It was found that this formula made the very rich specimens rather too dry and the very poor ones rather too wet, and that a better formula is 28 per cent. by weight of cement plus 4 per cent. by weight of sand and ballast.

Subsequent tests were made verifying that this did in fact give proper and uniform consistency to all mixtures, but the formula first given was used in the tests here described.

The cement was of good quality British manufacture.

Conduct of Tests.

The proportions of cement, sand, and ballast were calculated so as to give 5,000 gms. of dry materials in all cases, the cement contents being 10 per cent., 20 per cent., 30 per cent., etc., up to 100 per cent. in the various tests, the remainder being divided between the sand and ballast in the proportions of 1 to 2.

These materials were weighed out, mixed, and the water calculated by the formula given was measured out and added.

Two cast-iron 4-in. cube moulds were filled with concrete, and the remainder of the concrete carefully kept.

After keeping for 24 hours in air the cubes and residue were weighed, and the cubes then kept in water for 28 days, when they were crushed.

The temperature during mixing did not vary outside the limits of 58° to 61° Fahr., and all the materials had been kept in the laboratory to acquire its temperature. The specimens were also kept approximately at this temperature when hardening in water.

The cubes were crushed in an "Amsler" machine. In most cases timber packing was used. The tests marked with an asterisk gave low results owing to a knot in the timber. The average in the curves has taken cognizance of this in giving these tests less

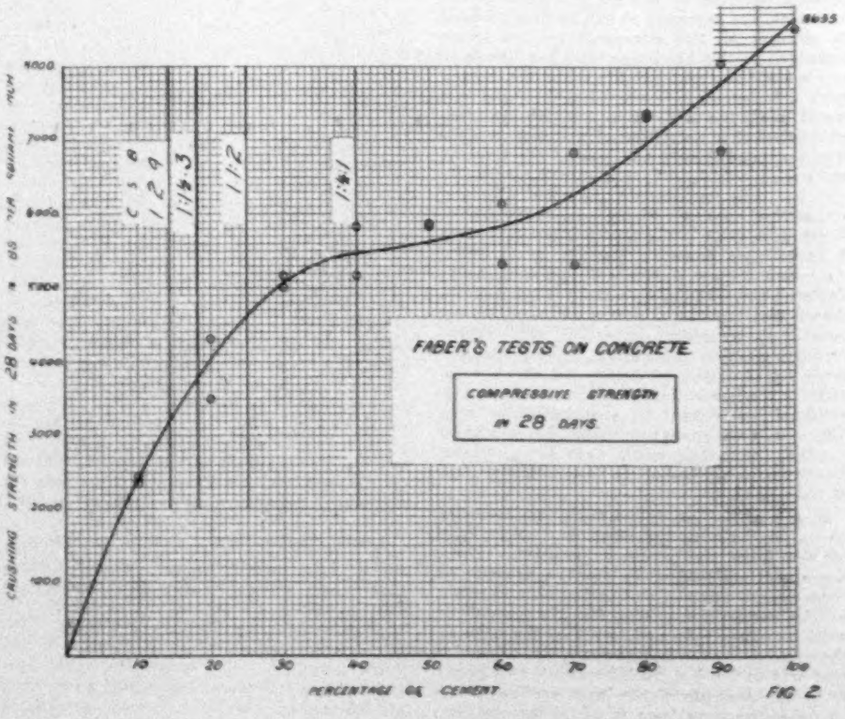


FIG 2.

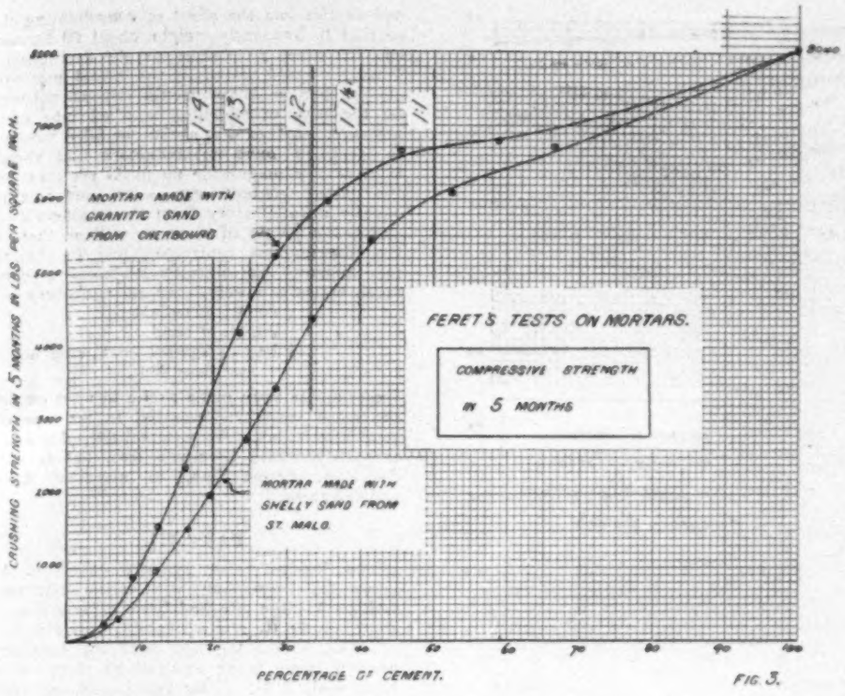


FIG. 3.

importance. The five poorer specimens were crushed without packing.

It was very marked that the richness of the concrete affected not only the strength but the method of failure. The richest specimens (100 per cent. and 90 per cent. cement) failed by splitting vertically. The medium ones (70 per cent. and 30 per cent. cement) gave the usual conical failure, while the poor ones (10 per cent. and 20 per cent. cement and less) failed by irregular crushing. These are illustrated in Fig. 1.

Fig. 2 shows the relationship between the percentage of cement and the crushing strength of the cubes. This curve is one of the greatest importance and brings out many interesting points.

It will be noticed that the positions on the curve corresponding to 1:2:4 and 1:1:2 mortars are indicated so that the relative strength of these and other similar proportions can readily be ascertained.

The crushing strength of 1:2:4 concrete from the curve is 3,150 lb. per sq. in., and that of the 1:1:2 concrete is 4,600 lb. per sq. in. It will be noticed that this is almost exactly 50 per cent. greater than the 1:2:4. This is a matter of considerable interest and has some bearing on the L.C.C. Regulations, which allow 600 lb. per sq. in. for 1:2:4 concrete and 750 lb. per sq. in. for 1:1:2 concrete. In other words, they only allow a 25 per cent. increase in stress against the 50 per cent. increase in stress actually ascertained by the experiments.

Fig. 2 also brings out the interesting fact that between 40 per cent. of cement and 70 per cent. of cement there is only a very small increase in strength. After that, however, the increase in strength with additional cement contents again becomes appreciable. This is a very interesting fact, and can readily be understood if the strength of the concrete is considered in terms of its tensile strength across vertical or oblique planes. It is of interest to note that the curve between compressive strength and cement contents has quite a different shape for concrete from its shape with cement mortars.

Fig. 3 gives the corresponding curves drawn from results published by R. Feret in 1897. It will be seen that the curvature in the case of the mortar curves is quite different, and a comparison of the two is of considerable interest.

Perhaps the next interesting fact emerging from these experiments is in connection with the shrinkage—that is to say, the reduction in volume of the dry materials which takes place when they are mixed together and wetted to form concrete. To ascertain this, not only were the materials actually weighed as mentioned and the volume of the concrete in the cubes ascertained, but the residue of concrete left over when the cubes had been made was also carefully measured, so that the total quantity of concrete produced from a given quantity of material was definitely ascertained. This shrinkage is, of course, of enormous importance to contractors, because from it can be calculated how much cement and materials are required to produce a cubic yard of concrete.

The shrinkage rises consistently with the richness of the mixture from about 18 for neat cement to about 36 for a 10 per cent. mixture. In other words, 100 parts of dry material were required to produce 64 parts of concrete, or that $100 \div 64 = 1.56$ cu. yds. of dry material are required to produce 1 cu. yd. of concrete of this particular richness. Of this 1.56 cu. yds. the cement would represent, roughly speaking, 0.16 cu. yds., leaving about 1.4 cu. yds. to represent volume of sand plus volume of ballast measured separately.

Generally speaking, the results of these tests confirm those of many other previous tests, which all go to show that the amount of shrinkage is generally greatly underestimated by contractors when estimating for concrete.

In the calculation of these shrinkages cement was taken as weighing 90 lb. per cu. ft. In practice it may actually weigh less, depending on its condition, and in such cases the shrinkage would actually be greater. Figs. 4 and 5 show the relationship between the volumes of cement, sand, ballast, and water, and the volume of dry materials and total materials, and should be of considerable assistance to contractors in estimating.

Fig. 6 gives the weight of concrete in lb. per cu. ft. for the different mixtures at different periods, from which it will be seen that the weight per cu. ft. increases as the cement content is reduced. These results also show that the cubes lost about 3 per cent. of water by evaporation in the first 24 hours, and re-absorbed about the same amount in the subsequent 28 days under water.

It is found that the safe stress for a 1:2:4 concrete works out to $3{,}150 \div 4$, which is nearly 787 lb. per sq. in. This is, of course, considerably higher than the present L.C.C. allowance of 600, and it would appear that the figure of 750 lb. per sq. in. which the lecturer had for some time been urging the L.C.C. to adopt in the revised Regulations is fully justified by the experiments.

As a matter of interest in passing, the corresponding safe stress to give a factor of safety of 4 for the 1:1:2 concrete comes to $4{,}600 \div 4 = 1{,}150$ lb. per sq. in. Naturally, he would only use these stresses when the materials were equal to those used in the tests.

In the experiments just described the lecturer expresses his indebtedness to Mr. H. T. Desch and Mr. Derek Hannen, who co-operated with him in conducting the tests and provided the necessary facilities, and whose interest aided materially in securing such accurate and consistent results.

PART II.

Experiments on the Variations of Volume in Proportioning Concrete.

Engineers, architects, and contractors have been in the habit of specifying concrete to be

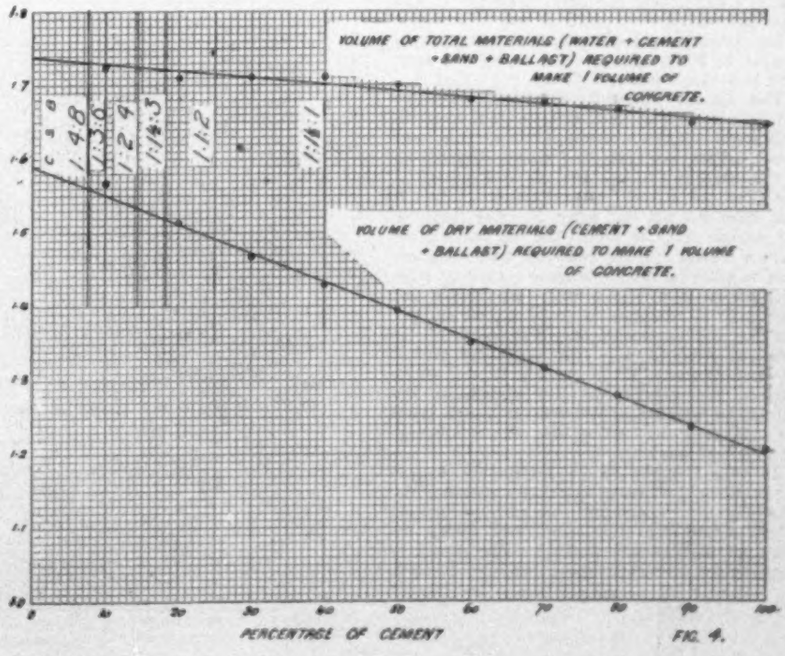

VOLUME OF TOTAL MATERIALS (WATER + CEMENT + SAND + BALLAST) REQUIRED TO MAKE 1 VOLUME OF CONCRETE.
VOLUME OF DRY MATERIALS (CEMENT + SAND + BALLAST) REQUIRED TO MAKE 1 VOLUME OF CONCRETE.
1:4.8
1:3.6
1:2.4
1:1.2
1:1
PERCENTAGE OF CEMENT

FIG. 4.

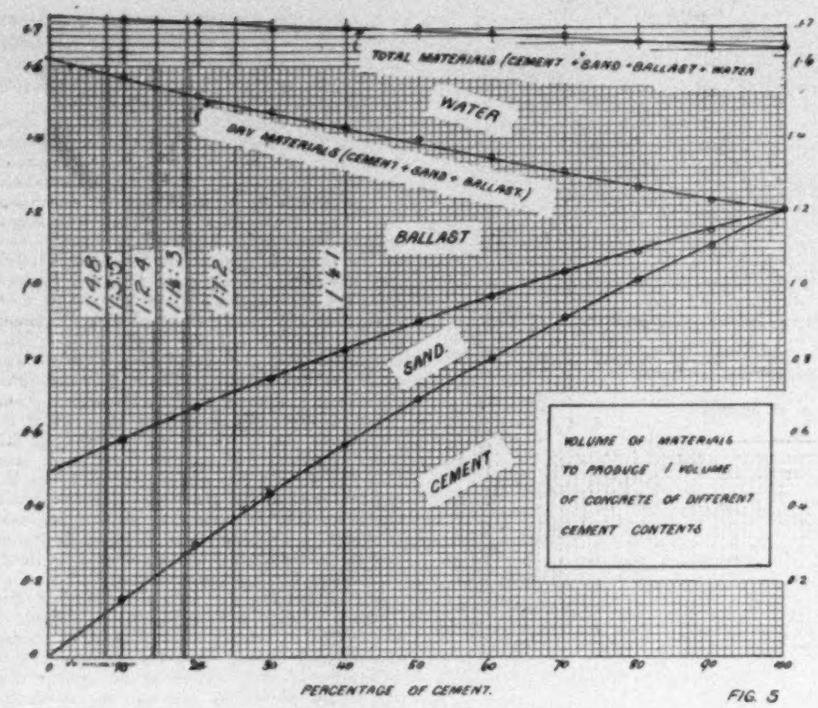


FIG. 5

apportioned by volume. For example, a common specification is 4 parts ballast, 2 parts sand, and 1 part of cement, all measured by volume. To this custom there are grave objections, owing to the fact that a cu. ft. of cement may represent anything between 60 and 90 lb., depending on the extent to which it is consolidated, or to which, on the other hand, air has been occluded between the cement particles, and in the same way, but to a much lesser extent, the amount of sand in a given volume varies with its wetness and its degree of consolidation.

He was aware of this discrepancy, but it was Mr. Desch who first opened his eyes to the extent of the variations, which he had never realised were so great as they are, and it was with a view to ascertaining this in a different manner that experiments were put in hand to show how much a given volume of cement and sand could vary in weight under different conditions. The actual cement used in the previous experiments was found to weigh 1,432 grams per litre when put in the litre pot and shaken until it was thoroughly consolidated. As 1,445 grams per litre corresponds to 90 lb. per cu. ft., it will be seen that this was a common figure.

The cement was then filled into the litre pot by allowing it to trickle in from a vessel held some distance above it through a very small orifice, so that the cement dropped in a thin stream through the air and settled in the litre pot without any shaking. When it had filled the pot and some distance above it, the excess over the top of the pot was cut off with a trowel and the contents were weighed. The weights in two separate experiments were 955 grams and 950 grams respectively per litre. This corresponds to about 60 lb. per cu. ft., and represents only two-thirds of the previous weight. For this particular cement the two figures of 90 lb. per cu. ft. and 60 lb. per cu. ft. represented the maximum and minimum weights of the cement which could be obtained by variations in compaction obtained by shaking.

It was thought to be interesting to see what actual weights would be obtained by scooping the cement with an ordinary cement scoop direct from the barrel and filling the litre pot without any shaking. The results of four consecutive experiments were as follows:

1,105 grams per litre.
1,206 ,, ,,
1,074 ,, ,,
1,079 ,, ,,

These results lie intermediate between the maximum and minimum values previously recorded, and lie rather below than above the mean, and correspond roughly to about 70 lb. per cu. ft.

The significance of these variations is, of course, as follows:—The proportions by volume for concretes are generally based on cement weighing 90 lb. per cu. ft., but actually the cement may weigh as little as 60 lb. after it has been sufficiently disturbed and is poured into the cement measure as loosely as possible. In such cases the engineer thinks he is getting 6 to 1 mixture on the basis of 90 lb. per cu. ft., when actually he would only be getting a 9 to 1 mixture on that basis, and in practice would actually get something which would lie intermediate between the two values.

When the cement is loaded into barrels or sacks at the works its weight per cu. ft. approximates to 70, and its transit by rail and carrier has the effect of consolidating it, so that it frequently weighs about 90 lb. per cu. ft. when it arrives at its destination. What it would weigh in the actual measure on the banker board would depend entirely on the way in which it is filled into such measure, whether it is shaken or filled loosely. It is clearly most unsatisfactory that variations of this magnitude up to 33 per cent. in the cement contents can occur, and this is equally unsatisfactory from the engineer's or architect's points of view as well as that of the conscientious contractor, and to obviate this difficulty the lecturer considers it very much better to specify concrete as follows:—

. . cu. ft. of ballast.
. . cu. ft. of sand.
1 bag of cement containing not less than 200 lb.

Experiments were made to see to what extent the same variations occurred in the case of sand and ballast. It was realised, of course, that they would be much less, but it was desirable, nevertheless, to ascertain their actual values.

PART III.

The lecturer was recently called in to advise in connection with some retaining walls. A large site had been excavated to a depth of 30 ft. approximately, and the surrounding earth, together with the buildings upon it, were being retained by means of a brick wall 3 ft. in thickness. At the time when he was called in the wall was showing signs of overturning owing to the pressure of earth behind it. It was immediately shored to render it safe, and subsequently strengthened as described.

In connection with this work the lecturer formed the opinion, after an examination of the soil, that the pressure on the back of the wall might safely be calculated at a pressure of $p=30\ (h+6)$, where "p" is the horizontal pressure in lb. per sq. ft. and "h" is the depth in ft. from the top of the soil. The effect of the buildings behind the wall could be allowed for by an equivalent surcharge of 6 ft. of earth.

On this basis the horizontal pressure at the top of the wall would amount to 180 lb. per sq ft., and that at a depth of 30 ft. to 1,080 lb. per sq. ft. It was desired, for several reasons, to have a check of these pressures if possible, and it was found that the trench for the retaining wall was strutted across by means of horizontal timber struts

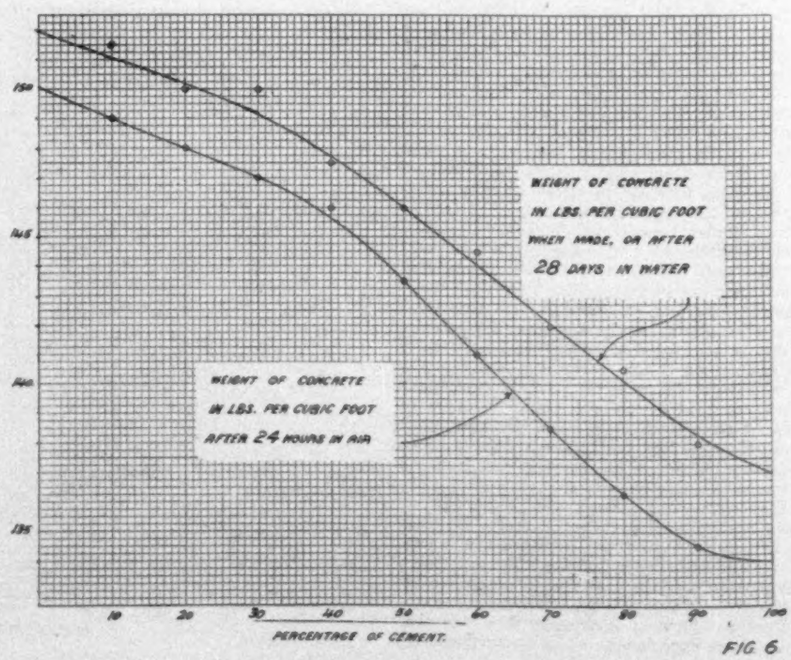

WEIGHT OF CONCRETE IN LBS. PER CUBIC FOOT WHEN MADE, OR AFTER 28 DAYS IN WATER
WEIGHT OF CONCRETE IN LBS. PER CUBIC FOOT AFTER 24 HOURS IN AIR
PERCENTAGE OF CEMENT.

FIG 6

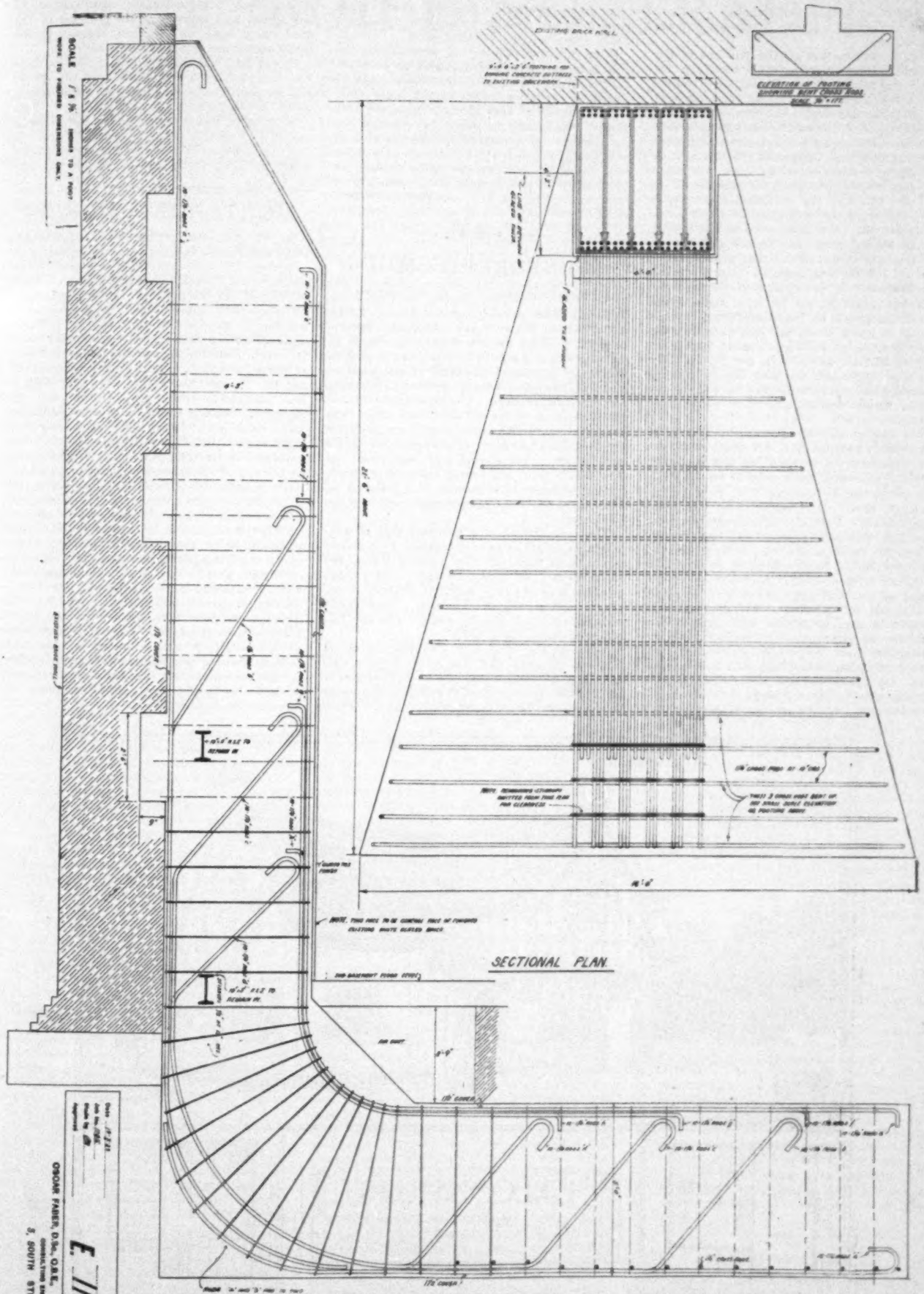

SECTIONAL PLAN.
SECTIONAL ELEVATION OF BUTTRESS.
OSCAR FABER, D.Sc., O.B.E.
CONSULTING ENGINEER
5, SOUTH STREET, E.C.1.
E. 1128.

FIG. 7.

7 ft. apart in both directions, the sectional area of the struts varying between 7 in. sq. and 8 in. sq.

This, of course, was on the portions of the wall where the dumpling had not been removed, and where the struts were still resisting the full horizontal pressure corresponding to their particular depth. It was noticed that the struts had indented themselves to a considerable distance into the horizontal timber walings, and this suggested the means of checking the earth pressure. A particular strut half-way down the wall was found to be 7½ in. sq., and the indention to the horizontal timber, which amounted to about ¾ in., was measured. A similar strut and a similar piece of waling were then tested in a testing machine, and it was found that a pressure of about 28,000 lb. was required to produce the same indention of the strut into the waling.

Having regard to the fact that these struts were 7 ft. apart in both directions, it was possible to check back, and calculate that the earth pressure at this depth must be of the order of 28,000 ÷ 49 = 570 lb. per sq. ft. The calculated pressure at that depth by his assumed pressure curve comes to 630 lb. per sq. ft., which was considered to be in close agreement.

This was considered of sufficient interest to be recorded, because it is not often engineers have opportunities of checking the pressures for which retaining walls need to be designed.

As a matter of interest Fig. 7 is added, showing how the walls were actually strengthened. A reinforced concrete buttress of rather peculiar design was constructed against the inside of the wall at intervals and efficiently bolted to the existing brick walls. Its effect is to increase the leverage of the weight of the wall from about 1 ft. to about 15 ft., and is therefore obviously extremely effective in supporting the wall against any tendency to overturn. It will readily be appreciated how extremely economical this method of strengthening the wall was as compared, for example, with the construction of a continuous reinforced concrete wall inside the brick one, which would have been the only practicable alternative which would have given adequate strength to resist the pressures which actually were found to exist.

From a point of view of obstruction, the arrangement adopted also proved to be peculiarly convenient, as these buttresses could be placed in certain recesses in the brick wall. It will be noticed that the buttresses are very heavily reinforced, as might be expected, as the pressure on a considerable width of wall was being resisted by a buttress only 4 ft. wide, and it was necessary to reduce the dimensions to an absolute minimum, with a view to causing as little obstruction as possible.

"REINFORCED MUD."

A CORRESPONDENT, "C. E. R." writes:—

"The repairs recently carried out at the old "White Horse" inn at Shere, Surrey, brought to light certain old-time methods of construction that should be of interest to modern builders. This inn is upwards of six hundred years' old, and its stout oak timbers will probably last for centuries more. The repairs necessitated the demolition of the old tiled roof, which was erected about three hundred years' ago, and upon removal there was discovered a second complete roof below. This second roof was made of "wattle," clay and mud, extremely hard, having weathered the storms, it is believed, of some three centuries prior to the erection of the tiled roof.

The mud, which was compact and of considerable weight, was held together by a coarse straw, and where it was necessary that the slabs should be stronger they were further reinforced by the imbedment of straight sticks, about half-an-inch in diameter. These sticks were much eaten into by worms, and age had rendered them very brittle.

Whereas the tiled roof was pitched at 45 degrees, the mud roof was at 30 degrees, and curiously enough its axis was at right-angles to that of its successor, and it had therefore quite independent timber queen-post trusses. These latter, which form part of the main framing of the house, still remain, as do portions of the mud slabs, since in parts the ceilings of the upper rooms are depended from them.

In one place the cavity between the two roofs was occupied by a bacon-loft, and the smoke had hardened and well preserved the wattle in which it was formed.

In spite of recent renovations, the house is still in bulk mainly fifteenth century work, and the wondrous old beams, and fine inglenook for which the inn is justly famed, still remain.

MORTEHOE CHURCH.

Mr. W. McG. Eagar, Secretary of the Garden Cities and Town-Planning Association, writes:—

"SIR,—The photographs of the bench-ends in Morethoe Church, reproduced in your issue of August 24, bring back familiar memories to those who know the West Country. A number of churches in Cornwall have bench-ends so similar that they would appear to be the work, if not of the same hand, at any rate, of the same school. Some of the most notable are the Parish Churches of St. Ives, Mullion, St. Mawgan-in-Pydar, St. Goran and St. Keverne. Strong traces of Italian influence have often been detected in them, and it is often stated that they are the work of Italian carvers who travelled round the West Country at the end of the seventeenth century. I have never heard any authoritative explanation, and it would be very interesting if any of your readers could give more precise information.

"The heads shown in panels in bench-ends of this type frequently bear an amusing resemblance to kings and knaves on playing cards (see Fig. 4 of your Mortehoe illustrations); at St. Ives there is a mermaid, and in one church, St. Goran, there is a representation of the Holy Trinity, one head with three faces, one shown full and two in profile. The vigour and fancy of the artist or artists are remarkable, and, though freedom of invention were given full play in the central panels, the form of the panels, with their tracery and carved beadings, are remarkably uniform."

House at Coulsdon, Surrey. MR. W. HERBERT ALTON, Lic.R.I.B.A., Architect.
[This house is being erected at a cost of £1,400.]

THE BUILDING TRADE.

BUILDERS' ACCOUNTS.*

This book deals in a thorough manner with the complicated problems to be found in dealing with the subject summarised under its heading. As stated in its introductory remarks, the special feature of the accounts of this trade is its costing accounts, which are so necessarily a part of its system, and in dealing with these technical accounts it is essential for a builders' accountant to have a practical knowledge, apart from his purely book-keeping knowledge. For instance, his knowledge of the trade and cash discounts for various classes of goods, both in passing accounts for payment and for charging to clients, necessitates him often being more of a tradesman than a book-keeper, and he is often more valuable as such, leaving the company's accountant to tackle the higher accountancy problems, such as the balance sheet and profit and loss ledger. Our remarks are, therefore, confined more to the costing books as such.

Whilst the whole of the books mentioned are highly useful, in actual practice the problem of cost of staff in keeping them at once arises. For instance, the "Register of Tenders" is a most useful reference volume, but to a large firm it would require one clerk to do nothing else but keep this register, and how often would its pages of figures be looked at for reference purposes? Ask the estimating staff! If any particular job is wanted for analysis, it can always be done. The same with departmental costs. Whilst it is very desirable to know that the joiners' department is paying well and the smiths' department is losing money, when one comes to find the necessary staff to keep the costs of each department and requisition goods from one department to another, plus establishment charges and profit, the poor estimator finds the costs of his job (the poor goose that lays the golden eggs) out of all proportion to what he can get paid in competitive prices.

The "Purchase Journal" rulings are very important, and those shown should be amplified under headings, instead of at the side, to include garage, plant repairs, office trade expenses, and insurances, all such totals to be agreed at the end of the financial year with the prime cost books.

Wages book: With regard to this item, we can only say here that this system seems to be devised to benefit (1) the printers; (2) the "National Association of Clerks and Timekeepers"; and (3) the Inland Revenue. For instance, "a *separate* sheet for every trade to be made up *every night* and posted to the office and entered up in a wages' book." What is the matter with a weekly pay sheet made up on each job from a daily time book and sent to the yard on Friday for the amount of wages required? A wages' *book* is surely only necessary for the yard wages, so that each department can be analysed and balanced. We notice, in passing, "deductions for local hospital." This is presumably ready for when hospitals are made a State charge, but surely a little previous at present, and what about the Truck Act?

"Contract Journal."—This, we presume, is intended as a wages cost book of each department at the works, showing the cost of each job under its number, but should be amplified to include material, thus getting a total cost in one book.

Sub. Wages Cash Book.—The author has certainly gone into the matter very extensively to include this as a necessary book, but we differ from him as to the necessity. Possibly, owing to the unemployment benefits in vogue, men are now rarely compelled to ask for "subs.", and when so done it is surely a matter only for a personal note by the foreman on the time book to ensure his getting repayment on the following pay day. Special cash books are not required in London. Yard stores accounts are very necessary, and with a system of bin cards to check stores "ins" and "outs" require full time services of a storekeeper and assistants, the question of classifying and entry of credits from contracts returned into stores being an item requiring a lot of care and time on the storekeeper's part.

Contract ledger as shown, generally called prime cost ledger, would not be found practical for large firms, and would require to be considerably condensed, showing name of each contract at side with headings for wages, materials ex yard, accounts direct, transport, machinery, plant hire, petty cash, &c., so that all contracts are thus classified and the total spent on each shown every month. An establishment charges P.C. ledger should also be kept under the same headings, showing the total expenditure monthly on machinery, plant, trade expenses, &c., and percentage allocated to each contract.

*Builders' Accounts. By John A. Walbank, F.C.A. (London: Gee & Co., Ltd., 6, Kirby-street, E.C. 1.) Price 5s. net.

BUILDING EXAMINATIONS.

Mr. W. J. Stone writes:—

Sir,—I have read with much interest the letter of Mr. Gayer in your issue of the 17th, and I particularly noted the third paragraph, in which is indicated a form of registration for builders, a much-needed reform and one that will be welcomed by all builders and architects of merit. My article was designed to point out the bad construction of the Institute's Syllabus, and this appears to be amply justified in Mr. Gayer's admission that modifications are already contemplated.

As regards the charge of "not being constructive," presented by Mr. Gayer, I must point out that eighteen months ago the constructive side was suggested in my letter from the Building Surveyors' Association to the Institute, along with copies of letters to the Board of Education, and again as recently as April, 1923, and had the Institute taken the matter up then probably some of the anomalies might not have occurred and the anticipated modifications at so early a stage might have been avoided. This surely is some reflection upon the bodies with whom the Institute has collaborated. I still think it would have been wise and courteous to have conferred with some of the technical teaching staffs in addition to those referred to by Mr. Gayer, as the scheme bears evidence of hurried work.

It can be agreed, I think, that the cardinal point is that the Institute is one for (federated) master builders only. If so, one can accept their claims for the right to lay down the restricted conditions such as appear in the syllabus just issued. I confess that I looked upon the Institute from a much broader standpoint, and I seriously question the wisdom of the Institute in so restricting itself. Most of the industrial institutions and associations have a distinct national character, both educationally and commercially, and both the employing and employed class have admission on equal terms, usually by some form of examination, and these institutions set their standards of technique, etiquette, and commerce.

With respect to the building industry, it is perhaps the most disorganised of any of our great national industries, when, as a matter of fact, it should be the most complete, as it is one of the most important of the nation's callings. The aim should be one great national association or Institute of Builders representative of all branches—architectural, engineering, building, manufacturing, commercial, in addition to the scientific, technical, and educational side—and should be available as a national court of appeal and reference. One well-organised set of examination syllabuses issued by such an Institute after approval by the various interested sections would command national support and carry national prestige worthy of the British building industry.

If the various examination syllabuses are examined it will be found that the standard is so variable as to be amazing. Why should the standard of structural building work be different in each of the architectural or engineering and surveying associations? In one comprehensive and properly-graded syllabus the various stages might be used or adapted to the different associations.

Briefly, I would suggest a syllabus similar to many now in use covering the period of adolescence—from sixteen to nineteen years—dealing with the fundamentals and forming a groundwork on which most students could build and direct their future studies. Such a course would require attendance at an evening school or college for three evenings per week. Following this would be a two- or three-year advanced course, and at the age of twenty-one or twenty-two years students so desiring would specialise and follow on to a degree course mainly through the day colleges or universities. Many students for business reasons must necessarily move about the country, and if there be no syllabus of a national character much of their work becomes valueless unless repeated in accordance with local demands. A desirable object would be to reduce the number of examinations. Instead, I find they are increasing in number. We have the Institute of Builders' just issued, and shortly the Clerks of Works and Builders' Foremen will be issuing their scheme, whereas if such a syllabus as briefly outlined were available, each of the associations could select the year or grade of work most suitable to its requirements. A further example in the allied branch of carpentry and joinery can be cited, where there are three distinct examinations in the final grade. Imagine the rivalry and unnecessary complexity the student has in determining which of the examinations he should take!

The personal reference to my walk in life is scarcely worth mentioning, but for Mr. Gayer's information I might add that a number of my students are now quite creditable employers. It would perhaps have been better if the remark had been supplanted by reference to other more important points raised in my article. One does not doubt that the accountancy and book-keeping side requires close observation at all times, but the careful training of the building craftsman and artisan (who compose the great mass of the persons who will be affected by examinations) is much more important. The skilled organisation and direction of work can only be brought to a high level by a sound educational policy leading to a scientific study of the various arts and crafts and a broadening of the conceptions of life and citizenship. I sincerely trust the Institute will keep the broader outlook in view when the contemplated amendments are being considered. One might close by quoting Sir Charles Higham, speaking at a City Livery Club luncheon recently; he said: "We are famed for British quality: let us not lose that reputation."

Quarry Owner's Estate.

Mr. Aspinall Brooke (73), of Fenny House, Hipperholme, Yorks, quarry owner, stone merchant, and brick manufacturer, left £9,817, with net personalty £7,241.

ESTIMATING FOR SMALL BUILDERS—V.

By J. H. BARNS, F.I.O.B.

IRONMONGER.

It is difficult to attempt briefly to convey any information relating to this trade, as there are dozens of different qualities, sizes, gauges and patterns of most of the articles, and a fair acquaintance with the trade is essential. The most ordinary items are butt hinges. The cost of these will depend upon the material, whether pressed steel, cast iron, wrought iron, or brass; also upon the width of the butt when open, as the narrower butts are usually the cheaper. If the butts are narrow the screws sometimes align, which may tend to split the wood; the wider hinges have the screw holes alternating. The cheaper butts, especially the cast ones, usually fit loosely at the joints.

The cost of the pressed steel and wrought iron butts will depend upon whether they are to be of one or two thicknesses of metal, and the number of knuckles in the joint. Japanned iron casement stays of the usual common pattern can be bought from 2d. to 2s. each. Iron cockspur casement fasteners can be bought from 3d. to 2s. 6d. each for the ordinary ones with the mortice plate attachment; those with hook plates cost a penny or two more.

Examples of Cost of Ironmongery fixed complete.

Cast-Iron Butts (say, equal to Baldwin's 200).

	Long.			
Per pair ..	2½″	3″	3½″	4″
Hinges	4d. ..	5d. ..	7d. ..	8d.
Screws, say ..	2d. ..	2d. ..	3d. ..	3d.
Fixing to deal ..	10d. ..	11d. ..	1/– ..	1/2
	1/4 ..	1/6 ..	1/10 ..	2/1
Profit and on-costs, 15 per cent. ..	2d. ..	3d. ..	3d. ..	4d
Total	1/6 ..	1/9 ..	2/1 ..	2/5

Fixing to hardwood, say, 50 per cent. extra.

Heavy pressed steel butts about the same price as cast-iron butts.

Wrought-Iron Butts.

	Long.		
Per pair.	2½″	3″	4″
Hinges	1/4 ..	1/7 ..	2/8
Screws, say	2d. ..	2d. ..	3d.
Fixing to deal	10d. ..	11d. ..	1/2
	2/4	2/8	4/1
Profit and on-costs, 15 per cent.	4d. ..	5d. ..	8d.
Total	2/8 ..	3/1 ..	4/9

Ordinary Cast Brass-Steel Washered Butts.

	Long.			
Per pair ..	2½″	3″	3½″	4″
Hinges	3/– ..	3/6 ..	4/3 ..	5/–
Screws	3d. ..	3d. ..	4d. ..	4d.
Fixing to deal ..	10d. ..	11d. ..	1/– ..	1/2
	4/1 ..	4/8 ..	5/7 ..	6/6
Add profit and on-costs, 15 per cent.	8d. ..	8d. ..	10d. ..	1/–
Total ..	4/9 ..	5/4 ..	6/5 ..	7/6

Japanned Cross Garnet or "T" Hinges.

These are made in several different weights. The following prices are for a rather light kind:—

	Long—Per pair.					
	10″	12″	14″	16″	18″	24″
Tee hinges—	6d. ..	8d. ..	10d. ..	1/2 ..	1/3 ..	2/6
Screws, say—	2d. ..	2d. ..	2d. ..	3d. ..	3d. ..	3d.
Fixing—	1/– ..	1/2 ..	1/2 ..	1/3 ..	1/4 ..	1/6
	1/8 ..	2/– ..	2/2 ..	2/8 ..	2/10 ..	4/3

Profit and on-costs, 15 per cent.—

3d. ..	4d. ..	4d. ..	5d. ..	5d. ..	8d.
1/11 ..	2/4 ..	2/6 ..	3/1 ..	3/3 ..	4/11

Heavy wrought-iron tee hinges would cost about 8d. per lb.

Japanned Iron Barrel Bolts with Brass Knob with Staples.

	6″	8″	10″	12″
Barrel bolts ..	7d. ..	1/3 ..	1/6 ..	1/10
Fixing	8d. ..	8½d. ..	9d. ..	10d.
	1/3 ..	1/11½ ..	2/3 ..	2/8
On-costs and profit, 15 per cent.	2d. ..	4d. ..	4d. ..	5d.
	1/5 ..	2/3½ ..	2/7 ..	3/1

Sash Fasteners.

There are many different patterns and materials in which they are made, the cheaper are in cast iron and the better ones in brass. The better qualities are somewhat on the lines of Hopkinson's Patent (which has, I believe, expired), and was in a form having a splayed shoulder to the moving arm to prevent tampering with window. A cheap 2½ in. brass sash fastener costs 1s., and fixing 9d. Iron sash fasteners cost about 3d. each and cost of fixing same as before.

Black Casement Stays.

	10″	12″	long.
Japanned, with pins ..	1/– ..	1/2	each.
Screws	1d. ..	1d.	,,
Fixing	8d. ..	8d.	,,
	1/9 ..	1/11	,,

Cockspur Casement Fasteners.

Cockspur	1/– each
Screws	1d. ,,
Fixing	8d. ,,
	1/9 ,,

The better qualities of casement stays and fasteners and ironmongery generally will cost more to fix. There are so many kinds of rim and mortice locks that, although no attempt will be made to detail their differences and prices, the following particulars will give some general information relating to the cheaper kind of locks, as it is useless to quote prices of locks without giving some details of the case and action of the lock.

Mortice Locks.

Sash ward locks with rough wrought interior, iron bushes and tumblers, brass bolts, thin stamped brass striking plate, Japanned case either 5 in. or 6 in. long and about ½ in. thick, 2s. 6d. each; similar lock, but with brass bolts and tumblers, 3s. each; ditto, but steel pressed action, strong spring brass bolts, japanned case, one lever, 3s. 3d. each; ditto, but polished wrought case, worth about 4d. more than last; ditto, polished case, brass bolts, tumbler and bushes, two lever, cast striking plate, 5s. 6d. each; ditto, but four lever, 6s. 6d. each. Most locks are now made reversible so as to be suitable for either hand. If locks are of fair to medium quality they will be made for the keys either "to pass" or "differ" without extra charge.

A fairly good lock can be obtained "in suites" subject to a master key without extra charge, except the cost of the master key, which varies from 2s. 6d. to 20s. each. With the better grades of ironmongery the screws for fixing are sometimes supplied by the makers. In most cases they are the ordinary wood screw with the slot at the top slightly enlarged as it is considered that the ordinary screw is likely to have the slot burred when driven. The additional cost of such screws is usually considerable, probably 2d. each. Half rebated or full rebated mortice locks are made in many of the grades of locks, and the cost of these are about 5s. to 10s. per lock. Rim locks are a little cheaper than mortice locks, and the remarks relating to them will apply to the former locks except that the cases of rim locks are usually japanned as the refinement of polished iron cases to rim locks has as yet hardly arrived to add a further joy to the life of the labour-loving housewife. To the small builder locks may be roughly placed into two categories, viz., those that are properly fitted, and those which are not. The easiest way to test the fitting of the "works" of a lock is to press the follower with the thumb and if it goes back in perfect alignment and without wobble it is reasonably well fitted and may be further examined, but if the follower wobbles and is obviously badly fitted it should be rejected as unworthy of further inspection.

Rim locks will cost between 2s. 6d. and 12s. 6d. each, and mortice locks from 2s. 6d. to 20s. each. Fixing rim locks from 2s. each and upwards. The cost of fixing mortice locks is from 2s. 6d. to 7s. 6d. each, and will depend upon whether the door has been prepared during manufacture to receive them. The retail charges for ironmongery are considerably higher than the wholesale rates, but it is doubtful if it will pay the small builder to buy in large quantities, as the cost of warehousing and keeping ready for immediate use a fair proportion of the great variety of items of ironmongery required would probably amount to much more than the increased cost due to retailers' charges.

Brass Cabinet Locks.

These may roughly be described as coming within two classes:—(1) Till locks and straight or cut cupboard locks; (2) box and desk locks.

The difference between the straight and the cut cupboard lock is that the straight cupboard lock is simply screwed on to the door and the "cut cupboard" has to be recessed into the style of the door and consequently costs more to fix The desk lock has a sloping top plate.

The cost of fairly cheap brass cabinet locks each would be as follows:—

Long.	2″	2½″	3″
Till or cupboard locks 1 lever ..	1/– ..	1/1 ..	1/2
Do. .. 2 ,, ..	1/6 ..	1/7 ..	1/8
Do. .. 4 ,, ..	2/– ..	2/1 ..	2/2
Box and Desk 1 ,, ..	1/2 ..	1/3 ..	1/4
Do. .. 2 ,, ..	1/7 ..	1/8 ..	1/9
Do .. 4 ,, ..	2/5 ..	2/6 ..	2/7

The cheaper brass cabinet locks (say 1 lever) usually have the brass cap at back riveted on, those of a little better quality have the cap screwed on. These locks are supplied neither "to pass" or *en suite* without extra charge.

Example:—

1—3″ brass 4-lever till lock.

	s.	d.
1—3″ till lock	2	2
Screws, say		1
Fixing, say	1	6
	3	9
Profit and on-costs, 15 per cent.		7
	4	4

The cost of fixing till locks will depend on whether the locks can be recessed into drawer by machine or must be done by hand, the former method is worth about 8d. and the latter about 1s. 6d. If a thread escutcheon were required it would have to be added on and would cost about 2d. for the escutcheon and 3d. for fixing.

Lock Furniture.

The slightly better qualities are usually manufactured on the lines of some (obsolete) patent and are so described. The cheaper patterns are usually unsatisfactory as the handles frequently become loose. The cost of furniture for rim and mortice locks will depend upon the system or patent under which it works, such as "Maces," "Pitts," &c., and whether the handles are of thin or stout metal or solid cast, and an additional charge will be made for anything of an ornamental pattern. The cheaper qualities of lock furniture are described as for a certain lock, thus 6 in., 7 in., or 8 in. lock furniture, the chief difference being that the knobs of the 8 in. lock furniture would be about 2 in. diameter and the 6 in. about 1¾ in. diameter. Other descriptions of lock furniture are sold by the diameter of the knobs or pattern of handles.

Cheap Brass Lock Furniture (Per set).

	6″	7″	8″
Drilled through rim furniture	8d.	10d.	1/–
"Maces" rim furniture	1/–	1/1	1/2
"Maces" mortice furniture	1/7	1/9	1/10

Example :—

	s.	d.
1 set 6″ mortice furniture	1	7
Fixing		9
	2	4
Add profit and on-costs, 15 per cent.		4
	2	8

The cheaper patterns of finger plates are worth about 6d. to 9d. to fix.

A double-action brass floor spring, made by a well-known London firm of spring makers, can be obtained for 60s., fitted with brass adjustable shoe and top centre. This would be suitable for all ordinary doors and guaranteed for three years. A similar floor spring, but prepared for exceptionally heavy doors in exposed positions would cost £5. If the first mentioned floor spring were fitted with check action, the additional cost would be 15s., making a total of 75s. each. In practice the check action springs are very likely to be damaged by persons pushing the door open before the check action has finished its work, and thus straining the air check. Another well-known firm of makers supply a floor spring for medium sized doors at 50s., and for heavy doors, 65s., and if fitted with check action, 80s. and 98s. respectively. Springs for single action doors (swinging one way only) would need to have check action and, including the top butt necessary for hanging, would cost about the same as double action floor springs with check. There are so many makers and patterns of floor springs that the small builder will be well advised to get a special quotation on each occasion for exactly what is required.

Example :—

1 double-action floor spring and top centre, and fixing to hardwood door and wood floor—

	£	s.	d.
1 spring	3	0	0
Fixing, say	1	0	0
	£4	0	0
Profit and on-costs, 15 per cent.		12	0
	£4	12	0

The spring makers will send to fix floor-springs, and their charge for this would be approximately 25s. per spring. Spring manufacturers will usually arrange to oil, maintain, and adjust their floor springs at a cost of about 15s. per annum.

The following are a few prices from the British standard list for bright iron wood screws per gross, with countersunk heads (Nettlefolds) :—

Nos.	8	9	10	11	12
Length					
½″	1/1½	1/2½	1/3	1/4	1/5½
⅝″ & 1″	1/3	1/3½	1/4½	1/6½	1/7½
1¼″	1/5½	1/6½	1/7½	1/9	1/11
1½″	1/7½	1/8½	1/9	1/11	2/1
2″	2/1	2/1	2/2	2/4	2/8

Brass Wood Screws (per gross).

Nos.	8	9	10	11	12
Length					
½″	2/8	3/–	3/4	3/10	4/4
⅝″ & 1″	3/4	3/8	4/1	4/6	5/–
1¼″	4/–	4/5	4/11	5/5	6/–
1½″	4/8	5/2	5/9	6/4	7/–

The discount varies in accordance with the quantity required, but the present discount is about 30 per cent. off iron screws, and 15 per cent. off brass screw list.

No. 9 screws are usually suitable for 2½ in. and 3 in. butts, and No. 10 screws for 4 in. butts.

[Previous articles in this series, with the dates on which they appeared, are as follows :—Preliminaries, June 29; Brickwork, July 6; Carpenter, July 20 and August 10.]

RATES OF WAGES IN THE BUILDING TRADE.

The following are the rates of wages in the building trade in England and Wales. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur :—

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Bricklayers' Labourers.	Plasterers Labourers.
Aberdare	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Accrington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Altrincham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Ashton-under-Lyne	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Barnsley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Barrow-in-Furness	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Barry	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Bath	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0	
Bedford	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Birkenhead	1/9	1/9	1/8½	1/9	1/9	1/9	1/8½	1/4	
Birmingham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Bishop Auckland	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Blackburn	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Blackpool	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Bolton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Bournemouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½	
Bradford	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Bridgwater	1/3	1/3	1/3	1/3	1/3	1/3	1/3	0/11½	
Brighton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½	
Bristol	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Burnley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Burton-on-Trent	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
Bury	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Cambridge	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Cardiff	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Chatham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0	
Chelmsford	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Cheltenham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0	
Chester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Chesterfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Colchester	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Coventry	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Crewe	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
Darlington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Derby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Doncaster	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Dudley	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
Durham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
E. Glam.(Mon. Vall.)	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Eastbourne	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½	
Exeter	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½	
Folkestone	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Gloucester	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0	
Grantham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
Grays	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/2½	
Grimsby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Great Yarmouth	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Guildford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½	
Halifax	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Harrogate	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Hartlepools	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Hastings	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Hereford	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0	
Huddersfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Hull	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Ipswich	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Lancaster	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½	
Leamington Spa	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
Leeds	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Leicester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Lichfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
Lincoln	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Liverpool	1/9	1/9	1/8½	1/9	1/9	1/9	1/8½	1/4	
Llanelly	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
London	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/2½	
Loughborough	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Luton	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Maidstone	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0	
Manchester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Mansfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Merthyr Tydfil	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Middlesbrough	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Newcastle-on-Tyne	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Newport, Mon.	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Northampton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
Norwich	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0	
Nottingham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Oakham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0	
Oldham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Oxford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½	
Plymouth	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½	
Pontypridd	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Portsmouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½	
Preston	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Reading	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½	
Rochdale	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Rochester	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0	
Rugby	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
St. Albans	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
St. Helen's	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Scarborough	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
Sheffield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Shrewsbury	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
Southampton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½	
Southend-on-Sea	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½	
Southport	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
South Shields	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Stockport	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Stockton-on-Tees	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Stoke-on-Trent	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Stroud	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3	0/11½	
Sunderland	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Swansea	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Swindon	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0	
Taunton	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Torquay	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½	
Tunbridge Wells	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½	
Wakefield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Walsall	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
Warrington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
West Bromwich	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Wigan	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Windsor	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½	
Wolverhampton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Worcester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
York	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	

(For rates of wages in the Building Trade in Scotland, see page 344.)

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in; the name and address at the end is the person from whom or place where quantities, forms of tender, &c., may be obtained.

BUILDING AND PAINTING

AUGUST 31.—**Bow, E.**—ROOM.—For an additions room to the laundry at the St. Andrew's Hospital, Devon's-road, Bow, E. 3, for Managers of Poplar and Stepney Sick Asylum District. Messrs. Andrews & Peascod, architects, 143, Bow-road, E. 3. Deposit £2.

SEPTEMBER 1.—**Aberystwyth.**—PAINTING.—For painting and decorating the old Infirmary, Aberystwyth. Mr. G. T. Bassett, architect, Aberystwyth.

SEPTEMBER 1.—**Aberystwyth.**—REBUILDING.—For rebuilding of part of Pyllimmon House, Marine-terrace, for University College of Wales. Mr. G. T. Bassett, architect and surveyor, Aberystwyth.

SEPTEMBER 1.—**Alton (Hants).**—KITCHENS, &C., AND ALTERATIONS.—Erection of new kitchens and laundry and for other alterations at the Alton Poor Law Institution, at Alton (Hants), for the Guardians of the Alton Union. Clerk to the Guardians, 46, High-street, Alton (Hants). Deposit £2.

SEPTEMBER 1.—**Barnsley.**—STREET WORKS.—Tenders are invited for the making and completing of—Henshall-street and Milnes-street, Barnsley; back road, between Hawthorne-street and St. George's-road, and Longcar-lane, Barnsley; back road, between Keir-street and Summer-street, Barnsley. PAINTING.—Tenders are invited for painting the following:—External work of the Public Baths, York-street, and Race-street, Barnsley; external work at Locke Park, Town End Recreation Ground, and St. Mary's Disused Burial Ground. PUBLIC CONVENIENCES.—Erection of new public conveniences at Locke Park, Barnsley. HOUSING.—For the erection of 82 non-parlour houses at the junction of Pontefract-road and Grange-lane, Barnsley. Mr. H. Taylor, Fairfield House Offices, Barnsley.

SEPTEMBER 1.—**Bourne.**—HOUSES.—Erection of 8 houses (4 parlour type and 4 non-parlour type), for the U.D.C. Mr. A. W. Plowright, surveyor, Meadowgate, Bourne. Deposit £1 1s.

SEPTEMBER 1.—**Brentford.**—CONVENIENCE.—Erection of a public urinal at the Recreation Ground, St. Paul's-road, for the U.D.C. Mr. W. J. W. Westlake, Clifden House, Brentford.

SEPTEMBER 1.—**Royston, near Barnsley.**—HOUSES.—Tenders are invited for the erection of 12 houses, for the U.D.C.; also the roadmaking and laying of sewer. Messrs. Dyson, Cawthorne & Coles, 10, Regent-street, Barnsley.

SEPTEMBER 3.—**Abertillery (Mon).**—FOURTEEN HOUSES.—For erecting, for U.D.C., under Rose Heyworth scheme, 14 houses at Abertillery. Work includes demolition of existing huts and clearance of the site. Surveyor, Council Offices, Abertillery.

SEPTEMBER 3.—**Aylesbury.**—AMBULANCE STATION.—For ambulance station, for the T.C. Mr. W. H. Taylor, Borough Engineer and Surveyor, Town Hall, Aylesbury.

SEPTEMBER 3.—**Bournemouth.**—LODGE.—Erection of gate lodge at North Cemetery, for the T.C. Borough Engineer, Bournemouth. Deposit £1 1s.

SEPTEMBER 3.—**Bristol.**—CONVENIENCE.—Erection of public convenience at Greville Smyth Park, for the T.C. Mr. L. S. McKenzie, City Engineer, Bristol. Deposit £2 2s.

SEPTEMBER 3.—**Bristol.**—PAINTING.—For re-painting externally houses on Knowle and St. John's-lane estates, for the T.C. Secretary, Housing Department, Council House, Bristol.

SEPTEMBER 3.—**Crediton.**—CEMETERY ENTRANCE.—For forming entrance, with gateways, carriage-way, and footpath, for Crediton Joint Cemetery Board. Architect, Mr. S. Dobell, 11, Bedford-circus, Exeter.

SEPTEMBER 3.—**Dartford.**—HOUSES.—Erection of 24 houses at Ship-lane, Sutton-at-Hone, for the R.D.C. Mr. Eustace J. Hobbs, Clerk, Council Offices, West Hill, Dartford. Deposit £2 2s.

SEPTEMBER 3.—**Failsworth.**—SHELTERS, &C.—Construction of wood shelters, conveniences, tool-house, and septic tank installation, for the U.D.C. (Unemployment Relief Works). Mr. J. W. E. Brown, Engineer and Surveyor, Town Hall, Failsworth, near Manchester.

SEPTEMBER 3.—**Fordingbridge.**—BRIDGE REPAIRS.—For the repair of a small masonry bridge known as Roaches County Bridge on the Fordingbridge-Ringwood main road, about 1 mile from Fordingbridge Station, for the Southampton C.C. Mr. W. J. Taylor, County Surveyor, The Castle, Winchester. Deposit £1 1s.

SEPTEMBER 3.—**Goodmayes.**—COTTAGES.—Erection of two cottages at Mental Hospital, Little Heath, Goodmayes, for the T.C. Borough Engineer, Town Hall, West Ham, E. 15. Deposit £1.

SEPTEMBER 3.—**Guildford.**—HOUSES.—Erection of 12 non-parlour houses on the Newark-road Site, for the R.D.C. Mr. John Anstee, Architect, Council Offices, Commercial-road, Guildford. Deposit £2 2s.

SEPTEMBER 3.—**Norwood, S.E.**—EXTENSION.—For an extension of the playroom at The Children's Home, "Cumberlow," Goat House Bridge, Norwood, S.E., for the Guardians of the Poor of the Lewisham Union. Guardians' Offices, 394, High-street, Lewisham, S.E. Deposit £1 1s.

SEPTEMBER 3.—**Pontefract.**—INFIRMARY BLOCK.—Erection of an Infirmary Block at Poor Law Institution, for the Pontefract B.G. Messrs. Tennant & Smith, architects, Ropergate, Pontefract. Deposit £3 3s.

SEPTEMBER 3.—**Rochdale.**—SCHOOL.—Erection of open-air school at Brownhill, for the T.C. Borough Surveyor, Town Hall, Rochdale.

SEPTEMBER 3.—**Tynemouth.**—TENEMENTS.—Erection of three blocks of tenements at Percy-square, for T.C. Mr. John P. Smillie, Borough Surveyor, Tynemouth. Deposit £2 2s.

SEPTEMBER 4.—**Aberdare.**—POST OFFICE AND TELEPHONE EXCHANGE.—Erection of a new Post Office and Telephone Exchange at Aberdare, for the Commissioners of His Majesty's Office of Works. Contracts Branch, H.M.O.W., King Charles-street, London, S.W.1. Deposit £1 1s., payable to the Secretary.

SEPTEMBER 4.—**Birmingham.**—REPAIRS, &C.—Execution of ordinary works and repairs at the Beacon and Lickey Hostels, Birmingham, for H.M. Office of Works. Contracts Branch, H.M. Office of Works, King Charles-street, S.W.1. Deposit 10s. 6d.

SEPTEMBER 4.—**Cardiff.**—PAINTING.—(1) External painting, City Lodge, East; (2) external painting, City Lodge, West, for the B.G. Mr. R. Stephenson, Clerk, Union Offices, 11, Park-place, Cardiff.

SEPTEMBER 4.—**Dromore.**—ADDITIONS.—For additions to Town Hall, for the U.D.C. Mr. A. F. Wright, Town Clerk, Dromore, Ireland.

SEPTEMBER 4.—**Hampton, Middlesex.**—HOUSES.—Erection of 24 houses on the Priory-road site, Hampton, for the Urban District Council. Mr. Sidney H. Chambers, Surveyor to the Council, Public Offices, Hampton, Middlesex. Deposit £2 2s.

SEPTEMBER 4.—**Thame.**—STAIRCASES, &C.—Erection of two staircases and minor alterations to the Infirmary block, for the B.G. Mr. C. Simmons, Clerk, 2, High-street, Thame.

SEPTEMBER 4.—**Various Places.**—ORDINARY WORKS AND REPAIRS.—Execution of ordinary works and repairs at the buildings in the charge of the Commissioners of H.M. Office of Works, at various places. Contracts Branch, H.M. Office of Works, King Charles-street, S.W. 1. Deposit 10s. 6d. in each case (payable to the Secretary).

SEPTEMBER 5.—**Cambridge.**—ROOM.—New dressing-room and other structural alterations at the Guildhall, for the T.C. Borough Surveyor, Guildhall, Cambridge.

SEPTEMBER 5.—**Clacton-on-Sea.**—HOUSES.—Erection of twenty houses in Central-avenue, Clacton-on-Sea, for the Clacton U.D.C. Council's Surveyor, Council Offices, Station-road, Clacton-on-Sea.

SEPTEMBER 5.—**Clavering, Essex.**—COTTAGE.—Erection of a cottage at Coldhams Farm, Clavering, Essex, for the Small Holdings and Allotment Committee of the Essex County Council. Mr. Jno. Stuart, F.R.I.B.A. County Architect, Springfield Old Court, Chelmsford.

SEPTEMBER 5.—**Dunmow, Essex.**—COTTAGE.—Erection of a cottage at Cooper's Farm, Dunmow, for the Small Holdings and Allotments Committee of the Essex County Council. Mr. Jno. Stuart, F.R.I.B.A., County Architect, Springfield Old Court, Chelmsford.

SEPTEMBER 5.—**Grassborough.**—BUNGALOWS.—Eight bungalows in blocks, four of two each, for U.D.C. Mr. James Totty, architect, Moorgate-street, Rotherham.

SEPTEMBER 5.—**Hendon.**—ENLARGEMENT.—Enlargement of the Union Offices, near Edgware, for the Guardians of the Hendon Union. Mr. F. J. Seabrook, Clerk to the Guardians, Union Offices, Edgware.

SEPTEMBER 5.—**London, E.14.**—REBUILDING WALLS, &C.—Rebuilding of the walls and other works in connection therewith to Block "G," at the Poplar Institution, High-street, Poplar, to plans and bills of quantities prepared by their architects, Messrs. Andrews & Peascod, for the Poplar Board of Guardians. Clerk to the Guardians, 45, Upper North-street, Poplar. Deposit £2.

SEPTEMBER 5.—**London, S.W. 18.**—REMOVING CHIMNEY STACKS, &C.—Removing chimney stacks and for alterations to two wards at the St. John's Hospital, St. John's Hill, S.W. 18, for the Guardians of the Wandsworth Union. Mr. F. J. Curtis, Clerk, Union Offices, St. John's-hill, Wandsworth, S.W. 18.

SEPTEMBER 5.—**Manchester.**—SCHOOL.—Erection of Higher Ormond-street Municipal School. Education Offices, Deansgate, Manchester. Deposit £1 1s.

SEPTEMBER 5.—**Omagh.**—BANK.—Erection of new premises, Omagh, co. Tyrone, for the Munster and Leinster Bank, Ltd. Messrs. Morris & Kavanagh, 68, Harcourt-street, Dublin. Deposit £2 2s.

SEPTEMBER 5.—**Sheffield.**—HOUSES.—Erection of 147 houses on the Manor Estate, Intake, for the T.C. Mr. F. E. P. Edwards, City Architect, Town Hall, Sheffield. Deposit £2.

SEPTEMBER 5.—**Twickenham.**—HOUSES.—Erection of 16 "A" type houses on the Prospect-crescent Site, Whitton, for the Twickenham U.D.C. Surveyor to the Council, Town Hall, Twickenham. Deposit £2 2s.

SEPTEMBER 6.—**Ballachulish.**—HOUSES.—Various works in connection with the erection of twelve three-apartment houses at Ballachulish, Argyllshire, for Argyll County Council. Mr. R. W. Campbell, architect, Oban.

SEPTEMBER 6.—**Birchencliffe.**—BUNGALOW.—For the various trades required in the erection of bungalow. Mr. Joe Ainley, architect and surveyor, 3, Chapel-hill, Huddersfield.

SEPTEMBER 6.—**Dewsbury.**—ALTERATIONS.—For several trades required in the alterations to Lloyds Bank, Northgate, Dewsbury. Messrs. Holtom & Fox, architects, Corporation-street, Dewsbury.

★SEPTEMBER 6.—**London, W. 6.**—ALTERATIONS TO LAVATORIES.—Alterations to the male and female lavatories at the Workhouse, 129a, Fulham Palace-road, for the Guardians of the Parish of Fulham. Mr. E. J. Mott, Clerk to the Guardians, Guardians' Offices, 129, Fulham Palace-road, Hammersmith, W. 6. Stamped addressed foolscap envelope.

SEPTEMBER 6.—**Salisbury.**—CONVERSION.—For converting outbuildings into engine room, &c., for the B.G. Messrs. J. Harding & Son, architects, 65, New-street, Salisbury.

SEPTEMBER 6.—**Stafford.**—PAINTING.—For painting the outside of the Children's Homes, Stone-road, for the B.G. Mr. C. B. Wilton, Clerk, Union Offices, Market-square, Stafford.

SEPTEMBER 6.—**Surbiton, Surrey.**—PUMP HOUSE.—Construction of a pump house, alterations to existing boiler house, boiler setting, &c., and other contingent works, at their Surbiton Pumping Station, in the county of Surrey, for the Metropolitan Water Board. Mr. Henry E. Stilgoe, Chief Engineer, Offices of the Board, New River Head, 173, Rosebery-avenue, E.C.1. Deposit £5, to 'Accountant to the Board.

BUILDING TRADE WAGES IN SCOTLAND.*

THE following are the present rates of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur:—

	Masons.	Brick layers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Brick-layers' Masons' Plasterers' Labourers.
Aberdeen	1/7	1/8	1/7	1/7	1/8	1/8	1/4½	1/-
Airdrie	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½
Alexandria	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2
Arbroath	1/7	1/6	1/6	1/7	1/6	1/6	1/5	1/1
Ayr	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½
Bathgate	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/1 to 1/2
Blairgowrie	1/7	—	1/7	1/7	1/7	1/7	1/6½	—
Bo'ness	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2
Coatbridge	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½
Dumbarton	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2
Dumfries	1/5	1/5	1/5	1/5	1/5	1/6	1/5	1/1 to 1/2
Dundee	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½
Dunfermline	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½
Edinburgh	1/7	1/7	1/7	1/7	1/8	1/7	1/6½	1/2½
Falkirk	1/7	1/7	1/7	1/7	1/7	1/7	1/5½	1/2½
Fort William	1/7	1/6	1/6	1/6	1/6	1/6	1/6½	1/1½
Galashiels	1/5	1/5	1/5	1/5	1/5	1/5	1/5½	1/1
Glasgow	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½
Greenock	1/7	1/7	1/7	1/7	1/7	1/7	1/5½	1/1 to 1/3½
Hamilton	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½
Hawick	1/5	1/5	1/5	1/5	1/5	1/5	1/5½	1/1½
Helensburgh	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½
Inverness	1/3½	—	1/3	1/4	1/4½	1/4	1/3½	10d. to 1/3
Kilmarnock	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½
Kirkcaldy	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½
Kirkwall	1/7	1/5	1/3	1/4	1/4	1/4	1/4	1/-
Lanark	1/7	1/7	1/7	1/7	1/7	1/7	1/5½	1/2½
Leith	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½
Motherwell	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½
Perth	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½
Stirling	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½
Stirlingshire (Eastern District)	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½
Wishaw	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½

* The information given in this table is copyright. The rates of wages in the various towns in England and Wales are given on page 345.

SEPTEMBER 17.—**Manchester.**—NURSES' HOME.—Extension of Nurses' Home at the Booth Hall Infirmary, for B.G. Mr. William Fishwick, Quantity Surveyor, 37, Brown-street, Manchester. Deposit £2 2s.

SEPTEMBER 8.—**Hampstead, N.W.3.**—SUNDRY WORKS AND ALTERATIONS.—Sundry works for alterations to existing buildings for the Guardians of the Parish of St. John, Hampstead. The Clerk, Guardians' Offices, New End, Hampstead, N.W.3. Deposit £2 2s.

SEPTEMBER 8.—**Wakefield.**—BRIDGE WORK.—For widening bridge over Kitchen Clough, on the Wakefield and Austerlands main road. West Riding Surveyor, County Hall, Wakefield. Deposit £1.

SEPTEMBER 10.—**Clydebank.**—VARIOUS WORKS.—Excavator and brick work, glazier, slater and roughcast, plumber and gasfitter, plaster, carpenter and joiner work in connection with the erection of 78 houses at Whitecrook, for the T.C. Town Clerk, Municipal Buildings, Clydebank. Deposit £1 1s.

✱SEPTEMBER 10.—**Erdington.**—HOUSES.—For the erection of 98 non-parlour type, Perry Common-road, Contract 136, and 102 parlour type, Gipsy-lane, Contract 137, for the City of Birmingham. Mr. Herbert H. Humphries, M.Inst.C.E., The Council House, Birmingham. Deposit £1.

✱SEPTEMBER 10.—**France and Belgium.**—HEADSTONES.—For a total supply of 15,000 headstones in a number of contracts, none less than 100, for the Imperial War Graves Commission. The Secretary, 82, Baker-street, London, W.1. Marked "Headstone Contract 5079–R."

SEPTEMBER 10.—**Glasgow.**—VARIOUS.—Offers are invited for the (1) excavator, brick, &c., works, and (2) carpenter and joiner, &c., works, in connection with the erection of the Mearnskirk Sanatorium, Mearns, Renfrewshire. Deposit £10 10s. each trade.

SEPTEMBER 10.—**Hemsworth.**—HOUSES.—Erection of 10 houses in blocks of two, for the U.D.C. Mr. A. Wright, Clerk, Council Offices, Barnsley-road, Hemsworth. Deposit £1 1s.

✱SEPTEMBER 10.—**Rochford, Essex.**—HOSPITAL BUILDING.—Erection of new Hospital Block (54 beds), extension of Nurses' Home (28 beds), new board room, &c., electric lighting power house, and other alterations and additions at the Poor-Law Institution, Rochford, for the Rochford Board of Guardians. Mr. Norman Evans, Licentiate R.I.B.A., 27, County Chambers, Weston-road, Southend-on-Sea. Deposit £1 1s.

SEPTEMBER 10.—**Woldingham.**—HOUSES.—Erection of 12 working-class dwellings at Lunghurst-road, Woldingham, for Godstone R.D.C. Council's Surveyor, Mr. T. C. Barralet, Council's Offices, Oxted. Deposit £2 2s.

SEPTEMBER 11.—**Ashton-under-Lyne.**—PAINTING.—For painting and other decorators' work at Electricity Generating Station and Offices, for the T.C. Borough Electrical Engineer, Wellington-road, Ashton-under-Lyne.

SEPTEMBER 11.—**Brierley Hill.**—ALTERATIONS AND ADDITIONS.—Alterations and additions to the Post Office, Brierley Hill, for the Commissioners of His Majesty's Office of Works. Contracts Branch, H.M.O.W., King Charles-street, London, S.W.1. Deposit £1 1s. (payable to the Secretary).

SEPTEMBER 11.—**Glasgow.**—HOUSES.—(1) Excavator, brick, and mason works; (2) carpenter, joiner, and ironmonger works; (3) slater and roughcast works; (4) plumber and gasfitter works; (5) plaster work; (6) painter work; (7) glazier work; and (8) iron railings and gates, for 228 houses at Kelvindale, for the T.C. Mr. J. Lindsay, Town Clerk, City Chambers, Glasgow.

SEPTEMBER 11.—**Manchester.**—WASHHOUSE.—Erection of public washhouse, at Ardwick, for the T.C. City Architect, Town Hall, Manchester. Deposit £1 1s.

SEPTEMBER 11.—**Rhondda.**—HOUSES AND ROADS.—For undertaking for the Rhondda U.D.C. following works:—(*a*) Building of fifty (50) non-parlour type houses, and, alternatively, fifty (50) parlour type houses on the same site, near the Ferndale Cemetery, Mardy-road, Ferndale; (*b*) The construction of roads and sewers in connection with the houses. Mr. E. Taylor, Engineer and Surveyor, Council Offices, Pentre (Rhondda). Deposit for (*a*) £5 and for (*b*) £2.

SEPTEMBER 11.—**Offaly (Ireland).**—GENERAL REPAIRS AND PAINTING.—For repairs and painting of the Hospitals and County Home, Tullamore. Mr. T. S. O'Ceallaig, Secretary, County Board of Health, Tullamore.

SEPTEMBER 11.—**Southgate, N.**—HOUSES.—Erection and completion of ten houses at Nursery-road, Southgate, for the U.D.C. Engineer and Surveyor to the Council, Town Hall, Palmer's Green, N.

✱SEPTEMBER 12.—**Brierley Hill.**—HOUSES, &c.—For the erection of 20 houses, together with the necessary roads and sewers, on the Mill-street Estate, for the U.D.C. Mr. John Yorke, Engineer and Surveyor, Town Hall, Brierley Hill, Staffs. Deposit £2 2s.

SEPTEMBER 12.—**Edinburgh.**—VARIOUS SCHOOL WORKS.—Various works in erection of Bellevue Technical and Commercial School, for the Education Authority of Edinburgh. Mr. J. A. Carfrae, architect, 3, Queen-street, Edinburgh.

SEPTEMBER 12.—**Morecambe.**—ADDITIONS TO HOSPITAL.—For whole works, or separate trades, for additions to Morecambe Hospital. Mr. S. Wright, architect and surveyor, Seaborn-drive, Morecambe.

SEPTEMBER 12.—**Penzance.**—REBUILDING.—For the rebuilding of the premises of Mr. J. W. Saundry, Chapel-street, Penzance. Mr. Henry Maddern, H.R.S. Mines, London, 11, Morrab-road, Penzance.

✱SEPTEMBER 12.—**Stone, Staffs.**—ENLARGEMENT.—For addition of two classrooms, cloakroom, heating chamber and alterations and improvements to Alleyne's Grammar School, for Staffordshire Education Committee. Mr. Graham Balfour, Director of Education, Stafford.

SEPTEMBER 12.—**Stromness.**—PIER.—The Harbour Commissioners of Stromness invite offers for the erection of a new pier in reinforced concrete. Mr. Robert S. Robertson, Clerk to Harbour Commissioners of Stromness. Deposit £1 1s.

SEPTEMBER 12.—**Woolwich, S.E.18.**—PAINTING, &c.—Painting works, &c., to the premises Furze Lodge, Plum-lane, Plumstead, for the Guardians of the Woolwich Union. Messrs. Whincop & Channer, architects, 42, William-street, Woolwich.

SEPTEMBER 12.—**Yorkshire.**—ALTERATIONS.—Whole or separate tenders for (1) Fairburn Council School—Additions to Head Teacher's House: Builder, carpenter and joiner, slater, plumber, and glazier, plasterer, and painter work. (2) Darton Mapplewell Council School—Minor alterations. (3) Swinton Kilnhurst Council School—Converting th W.C.'s and repairs to school. (4) Felliscliffe Council School—Repairs to asphalte playground, for the West Riding Education Committee. Education Department, County Hall, Wakefield.

✱SEPTEMBER 13.—**Highgate.**—SUB-STATION, &c.—For the erection of an electricity sub-station and engineer's residence at North-road, for Hornsey Borough. Mr. E. J. Lovegrove, Borough Engineer and Surveyor, Town Hall, Highgate, N.6.

SEPTEMBER 13.—**Ilford.**—HOSPITAL BUILDINGS.—Erection and completion, under one contract, of the following buildings at the Isolation Hospital, Grove-road, Chadwell Heath: (1) New administration block; (2) the raising of roof over two large wards and the conversion of rooms on first floor into two large wards; (3) new staircase block for access to last; for the Ilford U.D.C. Mr. H. Shaw, Engineer and Surveyor to the Council, Town Hall, Ilford. Deposit, £5 5s.

SEPTEMBER 13.—**Keswick.**—HOUSES.—Erection of sixteen Class "A 2" houses, in blocks of two, for the U.D.C. Surveyor, Town Hall, Keswick. Deposit £2 2s.

SEPTEMBER 13.—**Chadwell Heath.**—HOSPITAL BUILDINGS.—Erection of new Administrative Block; raising of roof over two large wards and the conversion of rooms on first floor into two large wards; and new staircase block, at Isolation Hospital, for Ilford U.D.C. Mr. H. Shaw, M.Inst.C.E., Council's Engineer and Surveyor, Town Hall, Ilford. Deposit £5 5s.

SEPTEMBER 13.—**Greenwich.**—PLASTERING, &c.—For plastering the internal walls of the East Block, supplying and fixing tubing for wires for electric lighting, and preparing and pointing the external walls at Greenwich Institution, Woolwich-road, East Greenwich, for the B.G. Mr. Alfred Roberts, surveyor, 92, London-street, Greenwich. Deposit £1 1s.

SEPTEMBER 13.—**Guildford.**—CONVENIENCE.—For construction of a public convenience, for the T.C. Borough Surveyor, Tuns-gate, Guildford.

✱SEPTEMBER 13.—**Worthing.**—ENGINE ROOM, &c.—For the erection of additional engine room and other work at the Electricity Works for the Borough. Borough Surveyor, Municipal Offices, Worthing. Deposit £1 1s.

SEPTEMBER 14.—**London, E.C.**—BRONZE UNIT.—Reconstruction of bronze unit at the Royal Mint, for the Commissioners of His Majesty's Works. Contracts Branch, H.M. Office of Works, King Charles-street, London, S.W.1. Deposit £1 1s.

SEPTEMBER 17.—**Laleham, Middlesex.**—ENGINE HOUSE, &c.—Construction of the superstructure for an engine house, boiler house, elevated coal bunkers, chimney shaft, fitters' shop, stores, ash hoist building, sewage disposal plant, and other contingent works, at the Littleton Reservoir, in the Parish of Laleham, in the county of Middlesex, for the Metropolitan Water Board. Mr. Henry E. Stilgoe, Chief Engineer, Offices of the Board, New River Head, 173, Rosebery-avenue, E.C.1. Deposit £10, to Accountant to the Board.

SEPTEMBER 18.—**Abertillery.**—POST OFFICE.—Erection of a new post office for the Commissioners of H.M. Office of Works, &c. Contracts Branch, H.M. Office of Works, King Charles-street, S.W.1. Deposit £1 1s.

✱SEPTEMBER 18.—**Barnsbury-grove, N.**—EXTENSION.—For the extension of the North Telephone Exchange, for the Commissioners of H.M. Office of Works, &c. Contracts Branch, H.M. Office of Works, King Charles-street, S.W.1. Deposit, £1 1s.

SEPTEMBER 18.—**Glasgow.**—VARIOUS WORKS.—For the various works required in connection with the erection of 1,140 houses at Knightswood. Areas Nos. 1 and 2, for the T.C. Mr. J. Lindsay, Town Clerk, City Chambers, Glasgow.

✱SEPTEMBER 18.—**Warlingham (Surrey).**—TELEPHONE EXCHANGE.—Erection of a new telephone exchange, for the Commissioners of H.M. Office of Works. Contracts Branch, H.M. Office of Works, King Charles-street, S.W.1. Deposit £1 1s.

SEPTEMBER 19.—**Mapplewell.**—ALTERATIONS.—The W.R. Committee invite tenders for alterations at Darton Mapplewell Council School. The Education Department, County Hall, Wakefield.

SEPTEMBER 20.—**Tedavnet, Co. Monaghan.**—CHURCH.—For the reconstruction and enlargement of Tedavnet Church, Co. Monaghan, for the Rev. Philip Mulligan, P.P., Scotstown, Co. Monaghan. Mr. R. M. Butler, F.R.I.B.A., architect, 23, Kildare-street, Dublin.

SEPTEMBER 24.—**Watchet.**—QUAY BUILDING, &c.—For construction of certain works including building of a concrete quay, sheeting and bulkhead walls for the improvement of Watchet Harbour. Mr. Frank Risdon, Clerk, U.D.C. Offices, Watchet.

OCTOBER 1.—**Hertfordshire.**—COTTAGES.—Erection and completion of 32 detached cottages at various places in Hertfordshire, for the C.C. Mr. A. Ernest Prescott, M.Inst.C.E., Lieut.-Col., County Surveyor and Architect, Hatfield. Deposit £1 1s.

NO DATE.—**Barnsley.**—PAINTING.—Scraping and painting two lattice pit-headgears. Houghton Main Colliery, near Barnsley.

NO DATE.—**Blackwood.**—PAINTING.—For painting two houses at Cefn-road, Blackwood. T. Jones, Schoolmaster, Cross Keys (Mon).

NO DATE.—**Buxton.**—CONVERSION.—For the conversion of "Parkholm," The Park, Buxton, into two flats. Mr. Chas. Flint, architect and surveyor, Buxton.

NO DATE.—**Cross Keys (Mon).**—PAINTING.—For painting of two houses at Cefn-road, Blackwood. Mr. T. Jones, Schoolmaster, Cross Keys (Mon.).

NO DATE.—**Durham.**—PAINTING.—For painting Nos. 1, 2, and 3, Holly-street, Durham. Scott, 8, Victoria-street, Pity Me.

NO DATE.—**Gilfach Goch.**—HALL.—For the several works in completing the Gilfach Goch Workmen's Hall and Institute (partly erected). Messrs. R. S. Griffiths & Partners, architects, Tonypandy. Deposit £2 2s.

NO DATE.—**Heckmondwike.**—PAINTING.—For painting Upper Independent Church, Heckmondwike, Sunday School, and adjoining premises; also the parsonage and cottage property. Mr. Ed. Batley, 1, Union-street, Heckmondwike.

NO DATE.—**Huntington.**—HOUSES.—Erection of 25 pairs of non-parlour type houses, for Cannock R.D.C. Mr. H. M. Whitehead, Director of Housing, Council Offices, Penkridge, Stafford. Deposit £5.

NO DATE.—**Kilmarnock.**—VARIOUS WORKS.—For the digger and brick works, carpenter and joiner works, plumber work, slater and roughcasting works, plaster work, and glazier work of 30 houses, for the T.C. Mr. Robert Blackwood, Burgh Surveyor, Kilmarnock.

NO DATE.—**Manchester.**—PAINTING.—For painting houses and shop. Mr. Grayshon, 18, Princess-road, Moss Side, Manchester.

NO DATE.—**Pontefract.**—RESIDENCE.—For new residence in Wounersley-road, Knottingley, for Mr. F. Sellers. Messrs. Tennant & Smith, architects, Ropergate, Pontefract.

NO DATE.—**Pontypridd.**—PAINTING.—For painting of Wesleyan Chapel, Treforest. Mr. Oliver Morgan, Park-street, Treforest, Pontypridd.

NO DATE.—**Swanwick.**—BILLIARD ROOM, &c.—For billiard room and other additions to Locks Heath Workmen's Social Club, Swanwick. Architect, Mr. Norman Atkins, 62, West-street, Fareham.

NO DATE.—**Worthing.**—VILLAS.—For erection of pair of villas. Elderslie, Grand-avenue, Worthing.

FURNITURE, MATERIALS, etc.

SEPTEMBER 1.—**Trowbridge.**—MATERIALS.—Supply of road materials, tools, &c., to the Wiltshire C.C. Mr. J. G. Powell, County Surveyor, Trowbridge.

SEPTEMBER 3.—**Hammersmith.**—MATERIALS, &c.—Supply of stores and materials to the B.C. for six months. Borough Engineer, Town Hall, Hammersmith, W.

SEPTEMBER 3.—**St. Marylebone.**—MATERIALS.—For supply of materials for various depts., for six months. Mr. J. Paget Waddington, Borough Surveyor, Town Hall, Marylebone, N.W.

SEPTEMBER 3.—**Willesden.**—SUPPLIES.—Supply (six or twelve months) of artificial slab paving, tar-paving, gravel, broken granite, lime and cement, stoneware pipes, ironmongery, timber, &c., for the U.D.C. Mr. F. Wilkinson, M.Inst.C.E., Engineer to the Council, Town Hall, Dyne-road, Kilburn, N.W.

SEPTEMBER 4.—**Farnham.**—MATERIALS.—Supply of cutlery, furniture, &c., for Farnham and Hartley Wintney School District. Superintendent, District Schools, Crondall, Surrey.

SEPTEMBER 4.—**Lancaster.**—SUPPLIES.—Supply (six months) of brushes, hardware, disinfectants, &c., to County Mental Hospital, Lancaster. Mr. J. R. Wilson, Clerk and Steward.

SEPTEMBER 4.—**Newport (Mon).**—SUPPLIES.—For supply for period of three or six months to the Board of Guardians of following materials:—Paints, paint brushes, electrical fittings, ironmongery, and tinware, engineers' stores, brushes, oils, rubber utensils, disinfectants, soap, steam coal, house coal, leather, drugs, &c. Mr. William Dowler, Clerk to the Guardians, Union Offices, Queen's Hill, Newport, Mon.

SEPTEMBER 5.—**Barnet.**—SUPPLIES.—Supply of oils and colours, &c., for the B.G. Mr. A. Wilshire, Clerk, Barnet.

SEPTEMBER 5.—**Manchester.**—SUPPLIES.—Supply of shovels and forks, &c., for the T.C. Mr. R. Williamson, Superintendent Cleansing Department, Town Hall, Manchester.

SEPTEMBER 5.—**Shardlow.**—MATERIALS.—Supply of disinfectants, soap, &c., for the B.G. Mr. J. Spencer, Clerk, St. Mary's-gate, Derby.

SEPTEMBER 6.—**Dewsbury.**—SUPPLIES.—For supply of oils, paints, ironmongery, and hardware, &c., for the B.G. Mr. E. T. Tunnicliffe, Clerk, Wellington-street, Dewsbury.

SEPTEMBER 6.—**Newcastle-on-Tyne.**—MATERIALS.—Supply (six months) of builders' hardware, paints, timber, bricks, sanitary pipes, machinery oils, steam jointings, brushes, &c., for the B.G. Mr. Gladstone Walker, Clerk, 127, Pilgrim-street, Newcastle-on-Tyne.

SEPTEMBER 10.—**Coventry.**—SUPPLIES.—Supply (six months) of brooms and brushes, &c., for B.G. Union Offices, 13, Little Park-street, Coventry.

SEPTEMBER 10.—**Edmonton.**—SUPPLIES.—Supply (six months) of ironmongery, painters' goods, timber, &c., for the B.G. Mr. E. Ridley, Clerk, 77, Bridport-road, Edmonton, N.18.

SEPTEMBER 10.—**Hull.**—SUPPLIES.—Supply of paints, oils, sand, cement, cable and other stores, for Humber Conservancy Board. Mr. A. W. Franklin, Secretary, Conservancy Buildings, Hull.

SEPTEMBER 10.—**London.**—HEADSTONES.—Supply of 15,000 headstones, for the Imperial War Graves Commission. Secretary, Works Department, Imperial War Graves Commission, 82, Baker-street, W.1. (Headstone Contract, 5079/R.)

SEPTEMBER 10.—**Manchester.**—MATERIALS.—Supply of granite setts and kerb, for the T.C. Paving, &c., Department, Town Hall, Manchester.

SEPTEMBER 10.—**Morpeth.**—SUPPLIES.—Supply (six months) of brooms, paints, oils, &c., to Northumberland Mental Hospital, Clerk and Steward, Hospital.

SEPTEMBER 11.—**Bristol.**—SUPPLIES.—For supply of ironmongery, electrical fittings, &c., for the B.G. Mr. T. S. Lamb, Clerk, St. Peter's Hospital, Bristol.

SEPTEMBER 12.—**Belfast.**—WIRELESS SUPPLIES.—For stores and materials for wireless telegraphy, &c., for police, for Government of Northern Ireland. Secretary, Ministry of Home Affairs (Maintenance Branch), Plough Chambers, 5, Cornmarket, Belfast.

SEPTEMBER 12.—**Liverpool.**—MATERIALS.—For supply of ironmongery, castings, wrought iron and steel goods, files, paving setts, kerbs, flagstones, oils and paints, timber, &c., for the T.C. City Engineer, Municipal Buildings, Dale-street, Liverpool.

SEPTEMBER 12.—**Macclesfield.**—SUPPLIES.—Supply of furnishing materials, paints, &c., to Cheshire County Mental Hospital, Macclesfield. Mr. W. G. F. Turgay, Clerk, to the Hospital.

SEPTEMBER 12.—**Richmond (Surrey).**—SUPPLIES.—Supply of oils and colours, &c., for the B.G. Mr. P. Umney, Clerk to the Guardians, "Parkshot," Richmond, Surrey.

SEPTEMBER 12.—**Smethwick.**—MATERIALS.—Supply (six months) of road materials, shovels, bricks, cement, ironmongery, &c., for the T.C. Mr. Alex. Hosken, Borough Engineer and Surveyor, Council House, Smethwick.

SEPTEMBER 14.—**Stockport.**—MATERIALS.—Labour and materials for construction of precipitation tanks at Cheadle Heath Sewage Works. Mr. H. Hamer, A.M.Inst.C.E., Borough Surveyor, Town Hall, Stockport. Deposit £5 5s.

SEPTEMBER 17.—**Worthing.**—TIMBER.—Supply of fifty squares of 1¼ in. pitch pine floor boarding to the T.C. Borough Surveyor, Worthing.

SEPTEMBER 18.—**Brentford.**—SUPPLIES.—For hardware, oils, &c., for the B.G. Mr. F. E. Harmsworth, Clerk, Toolands House, 34, Twickenham-road, Isleworth.

SEPTEMBER 18.—**Merthyr Tydfil.**—SUPPLIES.—For supply in bulk for period of six months from October 1 next, for the Poor Law Institutions at Merthyr and Trecynon and the Cottage Homes, Aberdare, for the Merthyr Tydfil Board of Guardians, of the following supplies:—Building materials, haulage, straw, electrical fittings, earthenware, oils, paints, glass, ironmongery, shoemaking materials, leather, boots, &c., drugs. The Clerk to the Guardians, Union Offices, High-street, Merthyr Tydfil.

SEPTEMBER 24.—**Dover.**—SUPPLIES.—Supply (six months) of bricklayer and plumber materials, ironmongery, &c., for the B.G. Mr. C. Dacre Carder, Clerk, Market-square, Dover.

NO DATE.—**Dundee.**—KERB.—Supply of 5,000 lin. ft. of whinstone kerb and 10,000 lin. ft. of granite kerb, for the T.C. Mr. George Baxter, M.Inst.C.E., City Engineer, 91, Commercial-street, Dundee.

NO DATE.—**Sheffield.**—SUPPLIES.—Supply (six months, Sheffield firms only) of ironmongery, brooms, &c., for B.G. Clerk to the Guardians, Union Offices, Westbar, Sheffield.

ENGINEERING, IRON AND STEEL.

AUGUST 31.—**Birmingham.**—BOILER.—Supply and erection of Lancashire boiler at the P.O. Telegraph Office, Birmingham, for Commissioners of H.M. Works, Contracts' Branch, H.M. Office of Works, King Charles-street, London, S.W. 1. Deposit £1 1s.

SEPTEMBER 1.—**Enfield.**—TELEPHONES.—For maintenance of telephones at Hospital of the Enfield and Edmonton Joint Hospital Board. Surveyor, Public Offices, Enfield.

SEPTEMBER 3.—**Dublin.**—STEELWORK.—Supply of steelwork for bridge for the Midland Great Western Railway of Ireland Co. Chief Engineer, Broadstone Terminus, Dublin. Charge 4s.

SEPTEMBER 3.—**Dundee.**—BRIDGE.—Erection of plate girder railway bridge over Kingsway, for the T.C. Mr. G. Baxter, City Engineer, Dundee. Deposit £5.

SEPTEMBER 3.—**Glamorganshire.**—WATER MAINS.—Providing and laying cast-iron mains and pipes at Ynysypiwm, Pontycymmer, Ogmore Vale, and Maesteg, for Mid-Glamorgan Water Board. Mr. Elryn W. Davies, Superintendent, Water Board Offices, Bridgend. Deposit £1 1s.

SEPTEMBER 3.—**Glasgow.**—BOILERS.—For two water tube boilers at new Baths, Woodside, for the T.C. Office of Public Works, City Chambers, 64, Cochrane-street, Glasgow.

SEPTEMBER 3.—**Stratford, E.**—MECHANICAL STOKERS, &C.—Mechanical stokers, coal elevator and conveyor for Abbey Mills Pumping Station, Abbey-lane, Stratford, London, E. 15, for the L.C.C. Chief Engineer, Old County Hall, Spring-gardens, S.W. 1. Deposit £2.

SEPTEMBER 4.—**Bethnal Green.**—TELEPHONE INSTRUMENTS.—Installation of telephone instruments in Offices, for the B.G. Mr. C. Faulkner Jones, Clerk, Administrative Offices, Bishop's-road, Bethnal Green, E.2. Deposit £1 1s.

SEPTEMBER 4.—**Cannock.**—LIQUEFYING TANKS.—Construction of two additional liquefying tanks at Littlewood Sewage Outfall Works, Cheslyn Hay, for R.D.C. Mr. H. M. Whitehead, Engineer's Office, Penkridge, Stafford.

SEPTEMBER 4.—**London, E.C.**—RAILWAY MATERIALS.—Supply of platelayers' tools, dressed wagon covers, pressed steel sleepers, bolts, nuts, and rivets, brass and iron or steel screws, steel draw-bars for wagons, ferro-prussiate paper, metals, &c., miscellaneous articles and materials, four-wheel goods brake body skeletons, for the Great Indian Peninsula Railway Co. Mr. R. H. Walpole, Secretary, 48, Copthall-avenue, E.C.2. Various fees from 2s. 6d. to £1.

SEPTEMBER 4.—**West Bromwich.**—HEATING SYSTEM.—Installation of heating system in the dining-hall at Hallam House, Hallam-street, West Bromwich, for the B.G. Mr. A. H. Ward, Clerk, 22, Lombard-street, West Bromwich.

SEPTEMBER 5.—**Sleaford.**—CABLE.—Supply and laying of a new pair of feeders, for the U.D.C. Mr. W. H. Wilson, Resident Electrical Engineer, Electricity Works, Sleaford, Lincs.

SEPTEMBER 6.—**Salisbury.**—HEATING INSTALLATION.—For installing boiler and heating plant at the workhouse. Mr. E. Mould, Clerk, 48, Blue Boar-row, Salisbury. Deposit, £3 3s.

SEPTEMBER 7.—**Halifax.**—TURBO-ALTERNATOR.—Supply of one 10,000 K.W. turbo-alternator with condenser, for T.C. Mr. W. M. Rogerson, M.I.E.E., Borough Electrical Engineer, Electricity Offices, 29, Northgate, Halifax.

SEPTEMBER 7.—**Morecambe.**—WATER MAINS.—For materials involved in transporting, laying and jointing cast-iron pipes for water mains, and fixing and connecting valves and hydrants in a number of streets, for the T.C. Mr. Percival Holt, A.M.I.C.E., Borough Water Engineer. Deposit £1 1s.

SEPTEMBER 10.—**Edinburgh.**—TRAM POLES.—Supply of 168 steel tramway poles and scrolls, &c., for the T.C. Tramways Manager, 2, St. James-square, Edinburgh.

SEPTEMBER 10.—**Hornsey.**—Low tension switchgear, for T.C. Borough Electrical Engineer, Tottenham-lane, Hornsey. Deposit £1 1s.

SEPTEMBER 11.—**Cowdenbeath.**—Supply and erection of wrought iron railings and gates, and stob and wire fencing. Mr. C. A. Alexander, Burgh Surveyor, Town House, Cowdenbeath. Deposit £1 1s. per schedule.

SEPTEMBER 11.—**Manchester.**—RAILS, &C.—Supply of (*a*) steel girder tramway rails; (*b*) steel tramway poles; (*c*) span-wire brackets for tramway poles; (*d*) copper bonds for tramway rails, for the T.C. Mr. Henry Mattinson, General Manager, Corporation Tramways, 55, Piccadilly, Manchester.

SEPTEMBER 12.—**Chesterfield.**—INDUCED-DRAUGHT PLANT.—For an electrically-driven induced-draught plant, for the T.C. Mr. R. H. Campion, M.I.E.E., General Manager, Electricity Department, 172, Chatsworth-road, Chesterfield.

SEPTEMBER 12.—**London, E.C.4.**—AXLES, &C.—For supply of:—(1) Steel axles for carriages and wagons; (2) red and white lead; (3) four-wheeled sheep vans and bogie boiler trucks, for the East Indian Railway. Mr. G. E. Lillie, Secretary, 73–76, King William-street, London, E.C.4. Deposit £1 1s.

SEPTEMBER 12.—**London, S.W.**—RAILWAY MATERIAL.—For brake beams, spring washers and axle-guards, for the Bombay, Baroda and Central India Railway Co. Secretary, Offices, 91, Petty France, Westminster, S.W.1. Fee 10s.

SEPTEMBER 12.—**Stoke-on-Trent.**—COOLING TOWERS.—For two cooling towers, 200,000 gallons each, with cooling ponds and accessories, for the T.C. Borough Electrical Engineer, St. Peter's Chambers, Stoke-on-Trent.

SEPTEMBER 14.—**Nottingham.**—PIPING, &C.—Manufacture and erection of steam water and other pipework, valves, tanks, &c., at the Power Station, for the T.C. Messrs. Preece, Cardew & Rider, 8, Queen Anne's Gate, Westminster, S.W.1. Deposit £5.

SEPTEMBER 15.—**Manchester.**—PUMPS.—For one set of electrically driven high-pressure centrifugal pumps, to deliver 1,000 g.p.m. against a pressure of 1,120 lb. per square inch. Secretary, Waterworks Offices, Town Hall, Manchester. Deposit £2 2s.

SEPTEMBER 15.—**Weaste.**—HEATING, &C., APPARATUS.—For heating and hot-water service apparatus, for Union Infirmary, Stott-lane, Weaste, for the Salford B.G. Mr. T. Roland Wollaston, M.I.M.E., Lord's Chambers, 26, Corporation-street, Manchester. Deposit £2 2s.

SEPTEMBER 17.—**Aberdeen.**—COAL HANDLING PLANT.—Supply and erection of a 40-ton coal handling plant, with band conveyor, gravity bucket conveyor, and steel hopper and chute. Mr. J. A. Bell, Borough Electrical Engineer, Milburn-street, Aberdeen. Deposit £1.

SEPTEMBER 17.—**Farnworth.**—ELECTRICAL PLANT.—For a 50 K.W. rotary converter, complete with transformer, switchgear, &c., for U.D.C. Chief Electrical Engineer, Mr. A. J. Hutchinson, Electricity Works, Farnworth, near Bolton. Deposit £1 1s.

SEPTEMBER 17.—**London.**—MACHINE TOOLS.—Supply of machine tools, for the Council's Tramway Central Repair Depot, Charlton. General Manager, London County Council Tramways, Victoria-embankment, W.C.2. Deposit £2.

SEPTEMBER 19.—**Fulham.**—FILTRATION PLANT.—Supply and erection of filters and plant at the Fulham Public Baths. Superintendent and Engineer at the Baths, Walham Green, S.W.6.

SEPTEMBER 22.—**Manchester.**—COMPRESSOR.—For a portable air compressor; also paving breakers and caulking hammers, for T.C. Secretary, Waterworks Offices, Town Hall, Manchester.

SEPTEMBER 25.—**Dublin.**—PUMP.—For one pumping unit (oil engine and centrifugal pump), for the T.C. City Engineer, 28, Castle-street, Dublin, and Mr. J. S. Aflord, M.Inst.C.E., 11, Victoria-street, Westminster, London, S.W.1. Deposit £2 2s.

SEPTEMBER 27.—**Chelsfield.**—RESERVOIR.—Construction of covered service reservoir at Chelsfield, Kent, for the Metropolitan Water Board. Mr. R. E. Stilgoe, Chief Engineer, 173, Rosebery-avenue, E.C. Deposit, £10.

SEPTEMBER 27.—**Chile.**—PORT IMPROVEMENT.—Improvement of the Harbour of Constitucion, for the Chilean Government. Chilean Legation, 22, Grosvenor square, W. 1.

OCTOBER 1.—**Egypt.**—STEAM LAUNCHES.—For three 40 ft. steam launches, for Ministry of Public Works, Egypt. Inspecting Engineer, Egyptian and Sudan Governments, Queen Anne's Chambers, Westminster, S.W.1.

OCTOBER 9.—**Toronto.**—Alternating current generator, for T.C. Department of Overseas Trade, 35, Old Queen-street, S.W.1.

OCTOBER 24.—**Australia.**—BRIDGE.—Construction of bridge for Country Roads Board, Victoria. Agent-General for Victoria (Australia), Melbourne-place, Strand, W.C.2. Preliminary deposit £500.

OCTOBER 31.—**Australia.**—ELECTRIC CRANES.—Supply and erection at Port Adelaide of four 7-ton electric coal-handling cranes, for the South Australian Harbours Board. Agent-General for South Australia, Australia House, Strand, W.C.2.

NOVEMBER 1.—**Siam.**—BRIDGES.—Supply of superstructures of steel railway bridges to Siam State Railways. Messrs. C. P. Sandberg, 40, Grosvenor-gardens, S.W. 1. Charge 28s.

NOVEMBER 30.—**Sydney.**—BRIDGE.—Construction of the superstructure and substructure of a cantilever bridge across Sydney Harbour; also an alternative tender for the construction of the superstructure and substructure of an arch bridge across Sydney Harbour. Agent-General for New South Wales, Australia House, Strand, W.C.

DECEMBER 3.—**Sydney.**—High tension switchgear for Municipal Council. Department of Overseas Trade (Room 32), 35, Old Queen-street, S.W.1.

NO DATE.—**Neath.**—PIPE COLUMN.—For fixing 8 in. pipe column and byats in 200 yards shaft. Secretary, Clyne Merthyr Colliery, Neath (Glam.).

ROAD, SANITARY, AND WATER WORKS.

SEPTEMBER 1.—**Chapel-en-le-Frith.**—SEWAGE WORKS.—For construction of sewage disposal works at Bamford, for the R.D.C. Messrs. Brady & Partington, Engineers, Town Hall, Chapel-en-le-Frith. Deposit £5.

SEPTEMBER 1.—**Chesterfield.**—RESERVOIR.—Construction of a reinforced concrete reservoir, for the T.C. Mr Chas. Boldry, Engineer, West Bars, Chesterfield. Deposit £2.

SEPTEMBER 1.—**Langton Matravers.**—ROADS.—Widening and resurfacing of the "Valley-road," Langton Matravers, about 3½ miles in length, for the Dorset C.C. Mr. W. T. Fletcher, County Surveyor, County Offices, Dorchester. Deposit £2 2s.

SEPTEMBER 1.—**Netherton.**—ROAD.—Making-up of Netherton Colliery approach road, Netherton, for the Bedlingtonshire U.D.C. Mr. J. W. Pooley, Surveyor to the Council, Bedlington.

SEPTEMBER 1.—**West Riding of Yorkshire.**—ROADS.—For various road works in the districts of Saddleworth, Stanley, Birstall, Castleford, and Pontefract, for the C.C. West Riding Surveyor, County Hall, Wakefield. Deposit £1.

SEPTEMBER 3.—**Mid-Glamorgan.**—MAINS LAYING.—For providing and laying, for the Mid-Glamorgan Water Board, with all necessary valves, fittings, &c.:—(1) About 246 lin. yds. of 3 in. diameter cast-iron mains and 160 lin. yds. of 1 in. diameter galvanised iron pipe at Ynysyplwm, Llanharran. (2) About 163 lin. yds. of 4 in. diameter cast-iron mains at Victoria-street and Adare-street, Pontycymmer. (3) About 170 lin. yds. of 3 in. diameter cast-iron mains at Walters-road, Ogmore Vale. (4) About 400 lin. yds. of 3 in. diameter cast-iron mains at Park Housing site, Maesteg. Mr. Eiryn W. Davies, Superintendent and Manager, Water Board Offices, Bridgend. Deposit £1 1s.

SEPTEMBER 3.—**Mitcham.**—ROADS.—For the making-up of Lewis-road, for the U.D.C. Surveyor's Office, Broadway House, London-road, Lower Mitcham.

SEPTEMBER 3.—**Romford.**—SEWERAGE.—For construction of sewers, for the R.D.C. Mr. W. Fairley, Parliament-mansions, Victoria-street, S.W. Deposit £3 3s.

SEPTEMBER 3.—**Stirling.**—ROADS.—Re-surfacing of the roadway from Larbert Cross to Carron Iron Works with clinker or slag asphaltic macadam, for the C.C. Mr. Alexander Lindsay, Joint Road Surveyor, District Office, Falkirk.

SEPTEMBER 3.—**Tiverton.**—ROADS.—For steam rolling of district roads, for the R.D.C. Mr. J. F. Puggsley, Clerk, Tiverton.

SEPTEMBER 3.—**Uckfield.**—SEWAGE WORKS.—Construction of sewerage and sewage disposal works at Waldron, for the R.D.C. Mr. J. Taylor, Henley House, Uckfield. Deposit £3 3s.

SEPTEMBER 3.—**Ventnor.**—ROADS.—For widening of Newport-road, for the U.D.C. Mr. D. V. Howard, Surveyor, Town Hall, Ventnor, I.W.

SEPTEMBER 4.—**Morecambe.**—STREETS.—For making up streets within the borough, for the T.C. Mr. Percival Holt, A.M.Inst.C.E., Borough Engineer and Surveyor. Deposit £1 1s.

SEPTEMBER 4.—**Sale.**—DRAINING, PAVING, &C.—For draining, levelling, metalling, kerbing, paving, channelling, flagging, &c., Orchard-place, for the U.D.C. Mr. W. Holt, A.M.I.C.E., Engineer and Surveyor, Town Hall, Sale.

SEPTEMBER 5.—**Birmingham.**—SEWER.—Construction of about 2,600 yards of stoneware pipe sewer (Unemployment Relief Works), for T.C. Mr. H. H. Humphries, M.Inst.C.E., City Engineer and Surveyor, Council House, Birmingham. Deposit £2.

SEPTEMBER 7.—**Bexhill.**—SEWERS.—For construction of sewers, for the T.C. Mr. G. Ball, Borough Surveyor, Bexhill. Deposit, £1 1s.

SEPTEMBER 7.—**Southwold.**—ROAD.—Making up of Field Stile-road, Southwold, for the T.C. Borough Surveyor, Town Hall.

SEPTEMBER 8.—**Tynemouth.**—ROADS.—Construction of road and six bridges, for the T.C. Mr. J. F. Smillie, Borough Surveyor, Tynemouth. Deposit, £2 2s.

SEPTEMBER 8.—**Yorkshire.**—BRIDGE.—For widening Star or Kitchen Bridge, for the West Riding C.C. West Riding Surveyor, County Hall, Wakefield. Deposit £1.

SEPTEMBER 10.—**Blofield.**—SEWER.—About 3½ miles of 6 in., 7 in., and 9 in. sewer, a pumping station, and 1,100 yards of 8 in. cast iron rising main, at Thorpe Saint Andrew, for the R.D.C. Office of the Rural District Council, 17, Prince of Wales-road, Norwich; or Messrs. Martin & Roberts, MM.Inst.C.E., 44, St. George's-square, Westminster, S.W. Deposit £3 3s.

SEPTEMBER 10.—**Torquay.**—ROAD.—For road widening and wood-paving works, Torbay-road, Torquay for the T.C. Mr. Henry A. Garrett, A.M.I.C.E., Borough Engineer. Deposit £2 2s.

SEPTEMBER 11.—**Egham.**—ROADS.—For making up Park and South-avenues, Egham Hythe, for the U.D.C. Mr. G. W. Booth, Surveyor, Council Offices, Egham. Deposit £2.

SEPTEMBER 12.—**Buxton.**—DRAINAGE.—For reconstruction of drainage, and alteration of sanitary conveniences in connection with 16 houses, for the T.C Mr. Wm. Owen Coates, Sanitary Inspector, Town Hall Buxton.

SEPTEMBER 12.—**Middleton.**—ROADS.—For making-up and completing six streets. Borough Engineer and Surveyor, Town Hall, Middleton, Lancashire.

SEPTEMBER 12.—**Middleton.**—SEWER.—Reconstructing (*a*) the joint Middleton-Chadderton sewer, and (*b*) the Middleton branch sewer. Unemployment Relief Works, for the T.C. Borough Engineer, Town Hall, Middleton, Lancashire.

SEPTEMBER 13.—**Greenwich.**—ROAD AND SEWER.—Road and sewer works on Charlton Housing Estate, for the Borough Council. Borough Engineer, Town Hall, Greenwich, S.E.10.

SEPTEMBER 15.—**Bedwas.**—SEWERS.—For constructing, for the Bedwas and Machen U.D.C., subsidiary sewers at Bedwas, Machen and Maesycwmmer, work to include providing and laying of stoneware pipes, with manholes, and all incidental work. The work will be in three separate contracts. Mr. A. S. V. Taylor, Queen's Chambers, Orchard-street, Neath. Deposit, £2 2s.

SEPTEMBER 15.—**Westhampnett.**—BRIDGE.—For reconstruction in ferro-concrete of small bridge over the Aldingbourne Rife, near Gas Works at South Bersted, for the R.D.C. Surveyor of Highways, Council Offices, Pallant House, Chichester. Deposit £2 2s.

SEPTEMBER 21.—**Bognor.**—ROADS.—For making up Bassett-road, for the U.D.C. Mr. A. O. Bridge, Surveyor, Bognor.

SEPTEMBER 24.—**Blaenavon (Mon).**—FERRO-CONCRETE WORKS.—For construction for the Blaenavon U.D.C. of a ferro-concrete lining to the existing No. 4 Reservoir, comprising about 6,000 square yards of reinforced concrete. Messrs. Thomas & Morgan & Partners, architects, Gelliwasted-road, Pontypridd. Deposit £5 5s.

NO DATE.—**Cannock.**—ROADS, SEWERS, &C.—Construction of roads, sewers, surface water drains, and fencing, for Huntington Housing Scheme. Mr. H. M. Whitehead, Director of Housing, Council Offices, Penkridge, Stafford.

NO DATE.—**Tynemouth.**—ROAD AND BRIDGES.—The T.C. invite tenders for the construction of a road 25 ft. in width and about 700 yds. in length, and six bridges, near Northumberland Docks.

Competitions.

(*See Competition News, page* 318.)

Auction Sales, Tenders, etc.

SEPTEMBER 4, 5, AND 6.—**Sussex.**—Mr. F. H. Clark will sell, without reserve, the whole of the huts and building material contained in South Camp, Seaford, Sussex. Auctioneer, Railway Wharf, York-road, Wandsworth.

SEPTEMBER 5.—**Rotherhithe, S.E. 16.**—Messrs. J. T. Skelding & Co. will sell, without reserve, at Appleby's-yard, Silwood-street, Rotherhithe, S.E. 16, the valuable well-seasoned dry stock of timber, including 2,900 ft. cube dry English oak, &c. Auctioneers; 48, Gresham-street, Guildhall, E.C. 2.

SEPTEMBER 6.—**Hastings.**—Messrs. Veryard & Yates will sell without reserve, building materials arising from demolition of old East Sussex Hospital. To clear site for new music pavilion, Hastings (on sea-front facing pier), timber, fittings, and building materials. Auctioneers, 365, Norwood-road, S.E.27.

SEPTEMBER 11.—**Suffolk.**—Messrs. Veryard & Yates will sell at "Oakley Hall," near Rye, Suffolk (on Norfolk and Suffolk borders, 4½ miles from Diss Station, L. & N.E. Rly.) building materials and fittings arising from demolition of the above important mansion. Auctioneers, 365, Norwood-road, S.E.27.

*SEPTEMBER 11.—**Eltham.**—Mr. F. H. Clark will sell, without reserve, timber and materials contained in the Women's Hostels, Well Hall-road, at 11 a.m. Auctioneer, Women's Hostels, Well Hall-road, Eltham.

Public Appointments.

SEPTEMBER 3.—**Grays, Essex.**—Housing Assistant in the offices of the Engineer and Surveyor required by the Grays Thurrock U.D.C. Mr. Herbert S. Goodall, Engineer and Surveyor, Council Offices, Grays.

SEPTEMBER 3.—**Middlesex.**—Architect or Building Surveyor required by the Justices of the Gore Division of Middlesex to examine the plans of alterations, &c., proposed in licensed premises, and to advise them thereon. The Clerk to the Justices, Edgware, by enclosing a stamped addressed envelope.

SEPTEMBER 4.—**London, N.E.**—VISITING TEACHER.—Visiting Teacher of building construction and drawing required by the London County Council at the L.C.C. Hackney Institute, Dalston-lane, N.E., for one or two evenings a week. Apply Education Officer (T 1 (*a*)), The County Hall, S.E.1 (stamped addressed foolscap envelope necessary) for form.

*SEPTEMBER 5.—**Blackpool.**—Clerk of Works required by the C.B. Mr. Francis Wood, M.Inst.C.E., Borough Surveyor, Municipal-buildings, Blackpool.

SEPTEMBER 8.—**Portsmouth.**—ASSISTANTS.—One temporary and two permanent assistants to the Borough Engineer, with Municipal experience, required by the County Borough of Portsmouth. Mr. Arthur W. Ward, Borough Engineer, Town Hall, Portsmouth, with covering envelope, marked "Borough Engineer's Assistant."

*SEPTEMBER 15.—**Rodbaston.**—Clerk of Works required by Staffordshire Education Committee to supervise erection of dairy at County Farm Institute, Rodbaston, near Penkridge. Mr. Graham Balfour, Director of Education, County Education Offices, Stafford.

*NO DATE.—**Hong Kong.**—Three Assistant Engineers required by the Government for service in the Public Works Department. Crown Agents for the Colonies, 4, Millbank, London, S.W.1.

PROPOSED NEW BUILDINGS & OTHER WORKS.*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C for Rural District Council; E.C. for Education Committee; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

ABERDEEN.—Plans passed by T.C.: Additions at 138 and 140, Broomhill-road, for Mr. W. Taggart and Mr. J. Brown, per Mr. G. Watt; house and garage, Anderson-drive, for Mr. H. Duncan, per Mr. J. Ellis; house, Queen's-road, for Mr. C. Harper, per Mr. G. Watt; house, Anderson-drive, for Mr. R. L. J. Henderson, per Messrs. Kelly & Nicol; addition to St. Mark's Episcopal Church, Short Loanings, for the Directors, per Mr. A. Murison; additions to auction mart, Powis-terrace, for Reith & Anderson, Ltd., per Messrs. Sutherland & George; garage and workshops at junction of West North-street with Mealmarket-street, for Mr. G. Bothwell; addition to flock factory, Ardarroch-road, for Messrs. J. Rhind & Son, per Mr. W. E. Gauld. Also plan for development of Links Sea Beach, estimated to cost £27,200.

ABERYSTWYTH.—The U.D.C. has applied to the Ministry of Health to sanction the borrowing of £23,085 for carrying out sewerage works.

ALTRINCHAM.—Mr. P. H. Cundall, architect, of "Windyside," Hartley-road, Altrincham, has prepared plans for a detached house in Macefin-avenue, West Didsbury, for Miss Campbell.

AMMANFORD.—Estimated to cost £12,000 to complete the new public hall erection, under Welfare Scheme, will soon be tendered for, site negotiations being advanced nearly to completion.

AYLESBURY.—Plans passed by the U.D.C.: Timber-framed bungalow near Aston-hill, for Major J. M. Pye-Smith; houses at Ford, for Mr. T. W. Wood; Wendover-road, Weston Turville, for Mr. E. P. Kempster; Station-road, Stoke Mandeville, for Mr. W. G. Ellis; cattle shed at Haddenham, for reconstruction of a cottage at Hulcott, for Mr. A. de Rothschild.

BARMOUTH.—A loan of £5,000 for temporary works to prevent coast erosion is to be sought.

BARROWFORD.—The U.D.C. is strengthening the Recreation Ground River Wall, at an estimated cost of £696. Plans have been approved for a building to be used as a garage for Mr. F. Hully, and a store-house in Richmond-road for Mr. A. Ashworth. It has been decided to fix an iron palisade fence around the new sludge drying works, at an estimated cost of £250.

BELFAST.—Plans passed by R.D.C.:—Thirty additional cottages for ex-service men, near Whiteabbey railway station.

BRETHERTON.—Mr. F. Howard, architect, of Preston, is designing an oak war memorial to be erected in the Wesleyan Church and a marble war memorial to be erected in the Congregational Church.

BRIERCLIFFE.—The Ministry of Health has sanctioned a loan of £4,935 for constructing additional water works.

BURNLEY.—Plans approved at a meeting of the Improvement Committee:—Water tower, Calder Vale Mill, for Messrs. The Calder Vale Room and Power Co., Ltd.; house, Pasture Gate, for Mr. T. H. Grey; two houses, Moseley Hill-road, for Mr. J. Nuttall; additions to "The Grange," Marsden-road, for Mr. J. Stuttard. ——It is proposed to install a new refrigerating plant and alterations to existing buildings at the Burnley Cold Air Stores, at an estimated cost of £8,455.

CASTLESIDE.—It is proposed to build a public hall and institute at Castleside, near Consett, at a cost of £1,250.

CHEETHAM.—Messrs. Matley & Brotherton, architects, of 11, Old Millgate, Manchester, have prepared plans for the reinstatement of premises, 91, Great Ducie-street, and John-street, for Mr. J. E. Steinberg.

CLITHEROE.—Mr. Bleazard, the Council Surveyor, is preparing plans and estimates for repairing Eshton-terrace and Duck-street. The Council are also considering the erection of a bridge over Mearley Brook. The Council have authorised application to be made to the Electricity Commissioners for a special order for a supply of electricity for the town. The Lancashire Electric Power Co. is to be approached.

COVENTRY.—Plans are to be prepared for an enlargement of Nurses' Home at the Infirmary.

DIDSBURY.—Mr. H. Davies, builder, of 13, Hooley Range, Heaton Moor, Stockport, is erecting detached and semi-detached modern houses on a site in Essex-avenue, and Fog-lane. Work on the first pair has commenced.

DUNDEE.—Plans submitted to Works Committee of the T.C.: Adelaide-place, garage for A. Dewar; Albert-street, additions to tenements for Mrs. A. Reid; Bright-street, Lochee, alterations on cottage for David Neave; Dalhousie-road, Barnhill, garage for D. T. Ferguson; High-street, alterations on premises for Louis Meotti; Loons-road, drill hall, &c., for City of Dundee T.A. Association; Murraygate, alteration on shop for Hipps, Ltd.; Strathmartine-road, extension workshop for Wm. Steele & Sons; Taft's-lane, alterations on shed for J. Robertson & Sons; West Park-gardens, garage for J. W. Hunter.

DURHAM.—Plans approved by R.D.C.: G. S. Legard, addition to Bow School, South-road, Durham; Thomas Blackett, cow byre, Shincliffe Colliery; William Lowe, house and butcher's shop, Carrville; A. Hollingworth, addition to house, Neville's Cross; Viscount Boyne, conversion of stables, &c., into golf clubhouse, Brancepeth.

EASINGTON.—The South Hetton Coal Co. have virtually decided to proceed with the erection of 100 houses at Murton Colliery. The Company has requested the R.D.C. to assist them with regard to roads, sewer and water supply.

EASTHAMPSTEAD.—The R.D.C. has given approval to schemes to cost £37,000 for the improvement of district roads.

ENNISKILLEN.—Plans passed by U.D.C.:—Houses to be built under Government loan.

FAVERSHAM.—Plans passed by T.C.:—Power & Son, alterations and additions to Grosvenor House, for the Co-operative Society; alterations and additions to International Tea Company's Stores.

FISHGUARD.—The Fishguard U.D.C. has passed plans for the erection of bungalow at High-street, for Mr. J. M. Evans.——The Brynymor road widening scheme of the U.D.C. has been sanctioned by the Ministry of Transport, who will make grant.

GLASGOW.—Plans for new bandstands and enclosures at Alexandra and Bellahouston Parks are being prepared. Plans approved: Cottage at Cathcart, for Mr. A. Campbell; addition to buildings in Wallace-street, for Campbell, Achnach & Co., Ltd.; new building for Institute of Accountants and Actuaries, at West George-lane; new building at Trongate, for Corporation; street off Julian-avenue, for Mr. J. C. M'Kellar; housing schemes are to be carried out at Merryplatts (200 cottages), Crossmyloof (276 tenement houses), Whitefield-road (126 houses).

GOSPORT.—Plans passed by T.C.: Lavatories, St. Matthew's Church; bungalow, Testcombe-road, J. E. Jones; cycle sheds to two houses in Privett-road, W. Chandler; motor garage, Brockhurst-road, Tutt & Sons; Privett Building Estate (lay-out), Alverstoke Land & British Co.; alterations to laundry, House of Industry, Alverstone Guardians; house, Grove-road, W. H. Roberts; additions to premises, Elson-road, E. Carter.

GREAT YARMOUTH.—Plans passed by T.C.: House, Marine-parade, Gorleston, for Mr. F. A. Osborne; pair of houses and two houses, Cliff-avenue, Gorleston, for J. Balls & Sons; shop and cottage, High-street, Gorleston, for Mr. C. H. Moger; house, Lowestoft-road, Gorleston, for Mrs. Emms; addition to house, Cromwell-road, Southtown, for Mr. Pearson; timber shed, Southtown, for Palgrave, Brown & Son; vestry to St. Luke's Church, Cobholm, for the trustees; garage, Bermondsey-place, for Mr. W. Field; roof over yard, Dene-side, for the Electricity Department.

HECKMONDWIKE.—Plans passed:—Alterations to shop premises in Westgate for Mr. Martin, and new shop in Railway-street, for Mr. W. Cooper.

HORNDEAN.—The following estimate prepared by Mr. G. C. Vernon Inkpen, F.S.I., for the proposed local water supply, has been forwarded by the R.D.C. to the Ministry of Health for approval: Mains and connections, Cowplain area, £5,774; Catherington, Horndean, Lovedean, and Blendworth area, £10,583; reinforced concrete reservoirs of 100,000 gallons capacity, £1,300; site for reservoirs, £150; pumping station, £1,000; easements, £100; engine and force pump, inclusive of gears and fitting, £1,500; site for engine and force pump, £150; telephone and electrical indicator, £100; clerk of works, £200; engineer's fees and expenses, £1,107; contingencies and charges, £500. **Total cost, £22,507.**

HOUGHTON-LE-SPRING.—The R.D.C. have provisionally accepted a tender for the erection, by Mr. F. W. Mole, of Chester-le-Street, of twenty houses on the East Rainton site, at a cost of £6,406.——The Lambton and Hetton Collieries, Ltd., are negotiating with the Houghton-le-Spring R.D.C. with a view to obtaining certain land on the Council's housing sites, for the purpose of erecting a number of workmen's houses.

LAUNCESTON.—Plans have been passed for tenement houses to be built with money bequeathed for the purpose, and tenders are to be invited forthwith by the T.C. for their erection.

LEEDS.—Crossgates Municipal Tenants' Association has decided to erect a club and institute in Orchard-road at an estimated cost of £7,000.

LEYLAND.—A faculty has been granted for the erection of a tablet in St. Andrew's Parish Church.

LIVERPOOL.—Plans for 12 new private houses have been passed by the T.C.

LLANELLY.—The Council has put forward a scheme of road improvement to cost £21,000, and the Ministry of Transport has promised conditional grants.——A special meeting of the Council has been decided upon to frame a housing scheme.

LLANDUDNO.—Plans passed by U.D.C.: Lay-out of roads, sewers, &c., at St. David's-road West; new dancing academy and shops, Mostyn-broadway; also plans for twenty-seven new houses.

LLANELLY.—The Harbour Commissioners have leased land to Messrs. Metals Accessories Co., Llanelly, for building of new sidings near to the fuel works.——Statutory notice has been given by the T.C. to acquire land for extensive road improvement and widening works.

MANCHESTER.—Schemes for four new roads, estimated to cost £200,000, are to be recommended to the Council Finance Committee and the Ministry of Transport. The first scheme is the widening of Blackley New-road from Middleton-road to Heaton Park. The second is the continuation of Mauldeth-road, West Withington, to New-road, No. 12, Princess-road Extension. The third will run from a point in Barlow Moor-road, West Didsbury, passing through Hough End Farm, Chorlton-cum-Hardy, and the fourth is a continuation of Withington-road to Road No. 10, near the Alexandra Park Aerodrome. It is anticipated that the schemes will provide work for about 1,000 unemployed men for 35 weeks, and is in addition to works recently recommended by the Highways Committee as suitable for relief works, estimated to cost £67,000.

(*Continued on page* 349.)

* See also our List of Contracts, Competitions, etc.

PRICES CURRENT OF MATERIALS.*

[Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.—Ed.]

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 2 0
Second Hard Stocks	3 17 0

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
Flettons, at King's Cross	2 15 3	Best Blue Pressed Staffs.	9 11 6
Do. grooved for plaster	2 15 3	Do. Bullnose	10 1 6
Do. Bullnose	3 8 3	Blue Wire Cuts	7 11 6
Best Stourbridge Fire brick:—			
2½ in.	11 3 0	3 in.	13 2 0

GLAZED BRICKS—

Best White Ivory, and Salt Glazed Stretchers	22 0 0	D'ble Str'tch'rs	30 10 0
		D'ble Headers	27 10 0
		One Side and two Ends	31 10 0
Headers	21 10 0	Two Sides and one End	32 10 0
Quoins. Bullnose and 4½ in. Flats	28 10 0	Splays and Squints	30 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours, Hard Glaze £5 10s. extra over white.

BREEZE CONCRETE SLABS.

Delivered London.

	s. d.		s. d.
2 in. per yd. super	2 1	3 in. per yd. super	2 9
2½ in. "	2 5	4 in. "	3 7

	s. d.	
Thames Ballast	10 6	per yard.
Pit Sand	14 9	" "
Thames Sand	15 6	" "
Best Washed Sand	15 6	" "
½ in. Shingle for Ferro-Concrete	14 6	" "
¼ in. "	15 0	" "
¼ in. Broken Brick	10 6	" "
Pan Breeze	5 6	" "

delivered 2 miles radius Paddington.

Per ton delivered in London area in full van loads.

Best Portland Cement, British Standard Specification Test £2 18 0 to £3 3 6

51/- alongside at Vauxhall in 80-ton lots.

Ferrocrete per ton extra on above	0 10 0
Super Cement	4 8 0
Roman Cement	8 15 0
Parian Cement	5 13 0
Keene's Cement, White	5 8 0
" " Pink	5 2 0
Plaster, Coarse, Pink	3 0 0
" " White	3 12 6
" Fine	5 12 0
Sirapite, Coarse	3 9 6
" Finish	3 17 6
Grey Stone Lime	2 10 9
Chalk Lime	2 10 9
Best Ground Blue Lias Lime	2 13 6
Hair	17 0 0
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months, carr. pd.

Stourbridge Fireclay in s'cks 35s. 0d. per ton at rly. dpt.

STONE.

	s. d.
BATH STONE—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	2 9½
Do. do. delivered in railway trucks at Nine Elms, L. & S.W.R., per ft. cube	2 11½
PORTLAND STONE—	
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, L. & S.W.R., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	4 4
Do. do. delivered on road wagons at above stations, per ft. cube	4 5
White basebed, 3d. per ft. cube extra.	

NOTE.—½d. ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.

HOPTON-WOOD STONE.

Delivered at any Goods Station, London.

Small random blocks, up to 10 ft. cube. Per ft. cube	7/-
Random blocks from 10 ft. and over "	17/-
Sawn two sides "	27/-
Sawn three or four sides "	32/-

YORK STONE, BLUE—*Robin Hood Quality.*

Delivered at any Goods Station London.

	s. d.
6 in. sawn two sides landings to sizes (under 30 ft. super.) Per Ft. Super	5 3
6 in. rubbed two sides, ditto "	5 9
3 in. sawn two sides slabs (random sizes) "	2 1½
2 in. to 2½ in. sawn one side slabs (random sizes) "	1 5½
1½ in. to 2 in. ditto, ditto "	1 3

HARD YORK—

Delivered at any Goods Station London.

	s. d.
Scappled random blocks Per Ft. Cube	5 6
6 in. sawn two sides landing to sizes (under 40 ft. super.) Per Ft. Super	5 4½
6 in. rubbed two sides ditto "	6 0½
4 in. sawn two sides slabs (random sizes) "	2 10
3 in. ditto. ditto "	2 5
2 in. self-faced random flags. Per Yard Super	7 11

ARTIFICIAL STONE.

Delivered in London Area in full van loads.	s. d.
Plain per ft. cube	6 6
Moulded " "	7 9
Cills " "	8 3

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£34 0	3 × 6	£25 0
4 × 9	34 0	3 × 11	34 0
4 × 8	29 0	2 × 11	34 0
4 × 7	28 0	3 × 9	33 0
3 × 8	28 10	2½ × 9	33 0
3 × 7	28 0	3 × 4½	24 0
2½ × 7	26 0	3 × 4	24 0

WOOD (*Continued*).

PLANED BOARDS.

1 × 11	£38 10	1 × 9	£36 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
⅝	21/-	1¼	33/6
¾	23/-	1½	38/6
1	26/6		

TONGUED AND GROOVED FLOORING.

Inches.	per sq.
1	26/6
1¼	33/6
1½	38/6

MATCHINGS (BEST).

Inches	per sq.
⅝	17/6
¾	22/-
1	26/-

BATTENS

Inches	s. d.
¾ × 2	2 4 per 100 ft.

SAWN LATHS.

Per bundle	0 2 10
Dry Wainscot Oak, per ft. super, as inch	0 2 0 to 0 2 6
¼ in. do.	0 1 6 to 0 2 0
Dry Mahogany—Honduras, Tabasco, African, per ft. super, as inch	0 1 9 to 0 2 6
Cuba Mahogany	0 3 6 to 0 4 0
Teak (Rangoon, Moulmein or Java), per load	45 0 0 to 50 0 0
American Whitewood planks, per ft. cube	0 14 0 to 0 16 0
Best Scotch Glue, per cwt.	4 10 0 to —
Liquid Glue, per cwt.	4 7 0 to 5 10 0

SLATES.

1st quality slates from Bangor or Portmadoc in truck loads delivered London area. Per 1,000 of 1,200.

	£ s. d.		£ s. d.
24 by 12	37 12 6	18 by 10	21 2 6
22 by 12	34 0 0	18 by 9	18 12 6
22 by 11	31 5 0	16 by 10	17 12 6
20 by 12	29 15 0	16 by 8	13 15 0
20 by 10	25 12 6		

TILES.

	Per 1,000 f.o.r. London. £ s. d.
Best machine-made tiles from Broseley or	5 7 6
Staffordshire district	5 12 6
Ditto hand made ditto	5 17 6
Ornamental ditto	5 17 6
Hip and valley tiles (per dozen) { Hand made	0 9 6
Machine made	0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION PER TON—

	£ s. d.
R. S. Joists, cut and fitted	13 10 0
Plain Compound Girders	15 10 0
" Stanchions	17 10 0
In Roof Work	20 10 0

MILD STEEL ROUNDS.

To London Station, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
⅜ in.	16 10 0	⅜ in. to ½ in.	13 10 0
½ in.	14 10 0	½ in. to 2½ in.	13 0 0

WROUGHT-IRON TUBES AND FITTINGS—

(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward if sent from London Stocks.)

	Tubes.	Fittings.	Flanges.
Gas	52½%	52½%	62½%
Water	47½%	47½%	57½%
Steam	42½%	42½%	52½%
Galv'd—			
Gas	37½%	42½%	52½%
Water	31½%	37½%	47½%
Steam	25 %	32½%	42½%

C.I. HALF-ROUND GUTTERS—London Prices, ex Works.

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	1/1½	11d.	3½d.
3½ in.	1/2½	1/0½	3½d.
4 in.	1/4	1/1½	3½d.
4½ in.	1/5½	1/4	4d.
5 in.	1/7½	1/5½	5d.

O.G. GUTTERS.

3 in.	1/6½	1/2½	3½d.
3½ in.	1/6½	1/2½	3½d.
4 in.	1/7½	1/4	3½d.
4½ in.	1/9½	1/6½	4d.
5 in.	2/1½	1/9	5d.

RAIN-WATER PIPES, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock angles.	Branches, stock angles.
2 in. plain	1/7½	1/1½	1/8
2½ in. "	1/9½	1/4	2/0½
3 in. "	2/1½	1/8	2/5½
3½ in. "	2/6½	1/11½	2/10½
4 in. "	2/11½	2/4½	3/5½

L.C.C. COATED SOIL PIPES—London Prices ex works.

	Pipe.	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
2 in. per yd. in 6fts plain	3 0½	2 2½	2 8
2½ in. "	3 6½	2 5½	3 3½
3 in. "	4 2½	2 8	4 0½
3½ in. "	4 7	3 3½	4 8½
4 in. "	5 1	3 9½	5 5

L.C.C. COATED DRAIN PIPES—London Prices ex works.

	Pipe.	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
3 in. per yd. in 9ft. lengths	4 9	5 8	8 10
4 in. " "	6 3	6 8	11 4
5 in. " "	7 6	11 6	18 2
6 in. " "	8 10	14 4	23 5

	Per ton in London. £ s. d.		£ s. d.
IRON—			
Common Bars	14 0 0	to 15 0 0	
Staffordshire Crown Bars—good merchant quality	14 10 0	15 10 0	
Staffordshire "Marked Bars"	17 0 0	18 0 0	
Mild Steel Bars	13 10 0	14 10 0	

METALS (*Continued*).

	£ s. d.		£ s. d.
Steel Bars, Ferro-Concrete quality, basis price	13 10 0	14 10 0	
Hoop iron, basis price	16 10 0	17 10 0	
" Galvanised	31 0 0	32 0 0	
Soft Steel Sheets, Black—			
Ordinary sizes to 20 g.	15 10 0	16 10 0	
" " 24 g.	16 10 0	17 10 0	
" " 26 g.	18 10 0	19 10 0	
Sheets Flat Best Soft Steel, C.R. & C.A. quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	21 10 0	22 10 0	
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	22 10 0	23 10 0	
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	24 10 0	26 10 0	
Flat and Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 9 ft. to 20 g.	21 0 0	22 0 0	
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	21 10 0	22 10 0	
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	23 10 0	24 10 0	
Sheets Galvanised Flat, Best quality—			
Best Soft Steel Sheets, 6ft. by 2ft. to 3ft. to 20g. and thicker	23 10 0	24 10 0	
Best Soft Steel Sheets, 22 g. and 24 g.	24 10 0	26 10 0	
Best Soft Steel Sheets, 26 g.	26 0 0	27 0 0	
Cut Nails, 3in. to 6 in.	21 10 0	23 0 0	

(under 3in. usual trade extras.)

METAL WINDOWS—Standard sizes suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1/4 to 1/7 per foot super.

LEAD, &c.

(Delivered in London.)	£ s. d.		
LEAD—Sheet, English, 4 lb. and up	34 0 0	..	—
Pipe in coils	34 10 0	..	—
Soil Pipe	37 0 0	..	—
Compo pipe	38 0 0	..	—

NOTE—Country delivery, 30s. per ton extra; lots under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 2s. cwt. extra.

Old lead, ex London area, at Mills per ton	21 10 0	..	—
Do., ex country, carriage forward per ton	22 10 0	..	—

PLUMBERS' BRASS WORK.

Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/	45/-	76/-	153/-	246/-	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62/-	92/-	174/-	300/-	588/- per doz.

NEW RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.
39/6	60/-	116/6 per doz

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2in.
7/6	11/6	17/-	29/-	36/-	63/- per doz.

BRASS SLEEVES.

1½ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES. S.F.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
35/-	56/-	98/-	162/-	228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.

	1½ in.	1½ in.	2 in.	3 in.
8 lbs. P. traps	33/-	41/-	56/-	101/- per doz.
8 lbs. S. traps	35/-	45/-	66/-	120/-

COPPER—	£ s. d.		
Strong Sheet per lb.	0 2 3	..	—
Thin " "	0 2 4	..	—
Copper nails "	0 2 3	..	—
Copper wire "	0 2 4	..	—
TIN—English Ingots "	0 2 0	..	—
SOLDER—Plumbers' "	0 0 11	..	—
Tinmen's "	0 1 1	..	—
Blowpipe "	0 1 3	..	—

PAINTS, &c.

	£ s. d.
Raw Linseed Oil, in pipes per gallon	0 3 6
" " " in barrels "	0 3 8
" " " in drums "	0 3 11
Boiled " " in barrels "	0 4 0
" " in drums "	0 4 2
Turpentine in barrels "	0 6 6
" in drums (10 gall.) "	0 6 9
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)	55 10 0
GENUINE WHITE LEAD PAINT— "Father Thames," "Nine Elms," "Park," "Supremus" and other best brands (in 14 lb. tins) not less than 5 cwt. lots per ton delivered	77 0 0
Red Lead, Dry (packages extra) per ton	42 0 0
Best Linseed Oil Putty per cwt.	0 16 0
Filocot per cwt.	0 15 6
Size, XD Quality fkn.	0 3 6

[*Concluded on next page.*]

* The information given on this page has been specially compiled for THE BUILDER and is copyright. Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS (contd.)

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft
15 oz. fourths	3½d.	32 oz. fourths.....	8½d
15 „ thirds	4½d.	32 „ thirds.....	10½d.
21 „ fourths	5d.	Obscured Sheet, 15oz.	4d.
21 „ thirds	6½d.	21 „	5½d.
26 „ fourths	6d.	Fluted 15oz. 6½d. 21oz.	9½d.
26 „ thirds.....	7½d.	En'lled 15 „ 5½d., 21 „	7½d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
¼ Rolled plate	4½d.
⅜ Rough rolled	5½d.
½ Rough rolled	5½d.
Figured Rolled, Oxford Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish white.....	6½d.
Ditto, tinted	9d.
Rolled Sheet	6d.
White Rolled Cathedral	5½d.
Tinted do.	7½d.

Cast Plate is same price as rough rolled.

VARNISHES, &c.

		Per gallon. £ s. d.
Oak Varnish	Outside	0 14 0
Fine ditto	ditto	0 16 0
Fine Copal	ditto	0 18 0
Pale Copal	ditto	1 0 0
Pale Copal Carriage	ditto	1 4 0
Best ditto.....	ditto	1 12 0
Floor Varnish.....	Inside	0 18 0
Fine Pale Paper	ditto	0 18 0
Fine Copal Cabinet	ditto	1 2 6
Fine Copal flatting	ditto	1 0 6
Hard drying Oak	ditto	0 18 0
Fine Hard drying Oak	ditto	0 19 0
Fine Copal Varnish	ditto	1 0 0
Pale ditto	ditto	1 2 0
Best ditto	ditto	1 12 0
Best Japan Gold Size.....		0 12 0
Best Black Japan.....		0 12 0
Oak and Mahogany Stain (water).....		0 12 0
Brunswick Black.....		0 9 0
Berlin Black.....		0 14 0
Knotting (patent)		1 5 0
French and Brush Polish.....		0 17 6
Liquid Dryers in Terebine.....		0 9 0
Cuirass Black Enamel.....		0 7 0

OBITUARY.

The death has occurred in a nursing home of Mr. Thomas Charles Jones, aged 57, managing director of T. C. Jones & Co., Ltd., of Shepherd's Bush, and for seven years a member of the Hammersmith Borough Council. Councillor Jones was an active worker in Hammersmith for upwards of twenty years. He was a Freeman of the City of London, Past Master of the Unity Lodge of Freemasons No. 1,637, Committee Member of the Shropshire Society in London, Trustee of the Bishop King's Charities, Chairman of the North Hammersmith Unionist and Conservative Association, President of the Shepherd's Bush Athenæum Club, No. 1 Life Member of the Regent-street Polytechnic.

The death is announced of Mr. John Corfield, of Belton-road, Whitchurch, Salop. He was formerly a well-known builder and contractor.

The death of Mr. Alfred Roper, builder and contractor, of Wellington, took place recently at the age of 75. He had been in business in the town for many years, and carried out numerous contracts in the district, including the building at the top of Queen-street for the United Banking Company (now Barclays Bank).

The death has taken place at Bideford, at the age of 78, of Mr. Edmund Ellis, a well-known North Devon builder.

TRADE NEWS.

"Bigger Business," the house organ of the Rawlplug Co., Ltd., Gloucester House, Cromwell-road, London, S.W. 7, a copy of which is to hand, is a bright little publication to be issued monthly. It contains many useful hints to business men, and copies will be sent to firms desiring them.

Visitors to the Shipping Exhibition, Olympia, which opens to-day will find an instructive series of demonstrations on Stand No. 17, Row H., occupied by Messrs. Wailes Dove Bitumastic, Ltd., of Newcastle-on-Tyne, the sole manufacturers of "Bitumastic" preparations. Visitors will witness "Bitumastic" successfully withstanding acid, refrigerating, and boiling water.

PROPOSED NEW BUILDINGS, &c.

Continued from p. 347

Mr. F. Fenn, architect, of 11, Chapel Walks, Manchester, has prepared plans for the conversion of a house, 424 Moss-lane East, into flats for Mr. R. M. Roberts. Mr. G. Westcott architect, of 13, Bridge-street, Manchester, has prepared plans for alterations to premises, 103 and 105, Stretford-road, Hulme, for Mr. A. Horwick. Mr. J. Thomason, architect, of Mosley-street, Manchester, has prepared plans for alterations to premises, 71, Fairfield-road, Openshaw, for Mr. J. Wilkinson.——The T.C. is considering a scheme, estimated to cost one million sterling, for a new road into Cheshire, via Northenden. Several bridges would require to be built.

METHLEY.—The U.D.C. is erecting 12 houses at an estimated cost of £6,451.

MIDDLETON.—Plans have been approved for detached houses in Manchester-road, Alkrington, one of which is being erected by Messrs. J. Middleton & Co., contractors, Shaw, near Oldham, and one by Mr. Robert Taylor, contractor, of 105, Manchester Old-road, Middleton, who have just commenced work on the foundations.

MONMOUTHSHIRE.—The County Education Authority has given formal notice of intention to build a new elementary central school at Lawn House, Rhymney.

MORLEY.—Tenders are being invited shortly by Mr. L. C. Hurst, architect, for a new bakehouse at Hungerhill, for Mr. Colbeck.

MORPETH.—The R.C. are proceeding with their original sewerage scheme involving Widdrington, Ulgham, and Chevington East, at an estimated cost of £19,500. Work is to be commenced immediately.

NELSON.—A sub-committee of the County Council has made the following recommendations with reference to new secondary school at Hole House to the County Higher Education Sub-Committee:—That 11¼ acres of land be acquired, and that a building to provide accommodation for not less than 400 pupils be erected.

NEW MILLS.—Father Prendergast, priest of St. Mary's Roman Catholic Church, has inaugurated an important forward movement for restoring the church, building a new presbytery, and establishing a young men's club. The estimated cost of the scheme is £5,000. No architect has yet been appointed.

OLDHAM.—The E.C. is considering the erection of a new elementary school on a site in Ward-street, and also a scheme for a proposed day open-air school.

OSSETT.—Plans approved by the T.C.:—Four cottages in Back-lane, for Mr. Abraham Pollard; warehouse at Flushdyke, for Mr. J. H. Nettleton; pair of houses at Gawthorpe, for Mr. J. W. Harrop; detached villa in Sunnybank-street, for Mr. John Child; bungalow in Sunnybank-street, for Mr. Albert Pollard; paint shop in Prospect-road, for Mr. J. W. Cudworth; house in Dewsbury-road, for Mr. P. Ward; additions to South Ossett Working Men's Club; and three scullery houses in Church-street, for Mr. Robert Spurr.——The Ministry of Health has sanctioned the borrowing of £2,000 for new water mains and extensions to mains, also for £1,128 for laying a new 6 in. water-main from Gawthorpe to Warneford-avenue. The Education Committee propose to erect new elementary school at Gawthorpe with proposed accommodation for 500 children.

OSWALDTWISTLE.—An inquiry was conducted by the Ministry of Health at the Oswaldtwistle Town Hall, into the application by the Council for sanction to borrow £4,366 for works of sewerage in the village of Knuzden, £2,810 for the laying of water mains, £3,500 for the conversion of conservancy closets into water closets, and £1,700 for works in connection with Rhyddings Park. There was no opposition.

PEMBROKE DOCK.—The U.D.C. has in consideration the building of concrete wall near St. Patrick's Church, the improvement of Croft's-terrace and Belle Vue-corners, and widening of Ferry-lane.

PICKERING.—Plans passed by R.D.C.: New institute (Ald. Twentyman).

PONTYPOOL.—It was reported to the U.D.C. that the Pontypool Athletic Association was anxious to be allowed to spend £2,000 on laying out tennis courts and bowling greens at Pontypool Park. A further sum would be available from the Miners' Welfare Fund. The Council decided to urge the Park Management Committee to allow this to be done. Mr. D. C. Udell is secretary of the Association.

PONTYPRIDD.—The Territorial Association is to build a new hall to replace that destroyed by fire a year ago. Plans are nearly completed. The adjutant is Capt. T. O. Jones, 5th Batt. the Welsh Regt., Pontypridd.

ROYSTON.—Plans passed by U.D.C.: Cottage, Mr. J. H. Mann; addition of kitchen to a house, for Mr. W. T. Dobbs.

RUISLIP-NORTHWOOD.—Plans passed by U.D.C.:—Shop premises, High-street, Ruislip, for Mr. H. E. Clark; lay-out Field End Estate, Field End-road, Eastcote, for Telling Bros., Ltd.

RUSHDEN.—Plans passed by U.D.C.: Extension of power station of the Rushden Electric Light Co.

RUSHOLME.—Mr. E. D. Sherlock, architect, 6, Ashlyn-grove, Fallowfield, has prepared plans for a garage to "Hazeldene," 178, Wilmslow-road, for Mr. H. Plummer.

RUSKINGTON.—The Ministry of Health has sanctioned the borrowing by the U.D.C. of £2,640 for the new housing scheme.

SAFFRON WALDEN.—Plans passed by T.C.: House, for Mr. H. A. Cornwell; house, for Miss E. G. Bowles; chimney shaft, for Mr. W. Elsom.

SCARBOROUGH.—Plans have been approved for the erection of two houses, Esplanade-road, Scarborough. Mr. F. W. Plaxton, Castle-street, Scarborough, is the architect.——The Borough Engineer has been instructed to submit plan and estimates for a new public hall. A loan of £34,156 for protective works on the Royal Albert Drive has been sanctioned. Plans and estimates for the construction of roads and sewers on the Prospect Mount Estate are to be prepared.

SHEFFIELD.—Plans have been approved for the erection of a new Secondary School at Osgathorpe Hills, Pitsmoor, with accommodation for 500 Catholic scholars, to be called De La Salle College. Brother Dunston is the headmaster. No contracts have been placed.

SLEAFORD.—The U.D.C. propose to extend their electricity mains at an estimated cost of £2,000.

SOUTHEND-ON-SEA.—The Town Hall Committee has been instructed to submit a scheme for the provision of a town hall; a new justices' room and petty sessions house is to be erected, at a cost of £5,500; the T.C. is seeking sanction to borrow £6,173 for re-surfacing London and Southchurch-roads and £3,990 for re-surfacing Marine-parade.

SOUTHPORT.—Plans have been prepared by Messrs. Lumb & Walton, architects, 16, Clifton-street, Blackpool, for the rebuilding of shops and offices for Messrs. Rawcliffes, Ltd. Tenders are being invited.

STAFFORD.—A site has been obtained in Marsden-road for a new Roman Catholic Church, and £2,000 has been raised towards the cost, but no architect has yet been appointed. The Rev. D. Kelly is the priest in charge.

STAINFORTH.—The U.D.C. propose to erect 170 additional houses, the first instalment of 50 to be put in hand at once.

THORNABY.—Plans passed by T.C.: Bungalow, Thornaby Green, Mr. A. McLeod; improvement to Dockway Sugar Mills, Messrs. W. & M. Pumphrey.

TYNEMOUTH.—In connection with their slum clearance, Tynemouth Corporation are inviting tenders for the erection of three blocks of tenements within the borough.

USK.—The occupier of Tenby House, Old Market-street, has submitted plans to the U.D.C. for erection of a shop.

WAKEFIELD.—A scheme is afoot for constructing a new infectious diseases hospital, to the plans passed in 1914. The matter has been referred to the T.C.'s General Purposes Committee. Additional land (68 acres) is to be purchased by the T.C. for the erection of working-class houses. Plans approved include house, Belgravia Mount, for Mr. J. Auty; 12 houses in Agbrigg-road, for Mr. T. Ibbottson; house in Horbury-road, for Mr. S. H. Charles; house in Horbury-road, for Mr. W. L. Jackson; five houses in Pinderfields-road and Selby-street, for Messrs. Kilkenny Bros.; house in Carr-lane, for Mr. C. J. Crocker; house in Horbury-road, for Mr. E. Billcliffe; house in Belgravia-road, for Mr. D. F. Martin.

WANDSWORTH.—Plans prepared for B.C.: Library, for Earlsfield; swimming bath, for Streatham. (Aggregate cost, £200,000.)

WESTHAMPNETT.—The R.D.C. is seeking a total loan of £17,588 for road works.

WHITBY.—Plans have been approved for the erection of a new band pavilion, "The Spa," Whitby. Mr. C. M. Blanchard, the local Surveyor, is the architect.

WIGAN.—Plans approved by the Improvements Committee: Two houses, Wigan-lane, for Messrs. Darbyshire & Jackson; house, Wigan-lane, for Mr. Thomas Ormerod; alterations to the "Freemasons' Arms," Warrington-road, for the Oldfield Brewery Co., Ltd.

WOKING.—Plans approved by U.D.C.:—Mrs. Witham, detached house, Prey Heath-road, Worplesdon; E. Ricks, detached house, Pembroke-road; W. G. Tarrant, Ltd., two detached houses, Hockering Garden Estate, off Park-road; W. G. Tarrant, Ltd., detached house, Hockering Garden Estate, off Park-road; Major Holbourn, detached bungalow, Kingsway-avenue; F. Aylott, four detached houses, White Rose-lane; H. M. Wyatt, detached house, Horsell Park Estate; Mrs. Roche, detached house, Fletcher-road; E. Ricks, amended plans to those approved on April 17 for a bungalow on Highlands Estate, Westfield; Dr. R. Thorne Thorne, addition to consulting room at "Greenhayes," White Rose-lane; H. C. Allen, first floor addition to the "Wishel," Pembroke-road; Embersons, corrugated iron store at the rear of premises at Chobham-road; A. B. Jones, garage at "Southfields," Woodham Rise; E. A. Cook, new boiler house of galvanised iron at Laundry, Step Bridge-path; S. W. Colman, wooden garage in connection with house, Waldens-road; Dr. Davies, garage, the "Dell," Goldsworth-road; — Owens, drainage of "Edgeware House," High-street, Knaphill.

WHITE CEMENT STUCCO

White cement stucco, which is used to a considerable extent in the United States, has been made the subject of a series of films, taken in America, showing the many uses of "Atlas" white cement stucco. This film was shown on Tuesday morning at the private theatre of Jury's Imperial Pictures, Ltd., Tower-street, St. Martin's-lane, W.C., and Mr. Frederic Coleman explained the many applications of the material. Among other things the views showed the textual finishes, whiteness, and durability which may be obtained with this stucco on the exteriors of buildings, and Mr. Coleman pointed out that a notable example of stucco work in London was the new Tivoli Picture House in the Strand.

On September 20, at 10.45, a more elaborate series of films illustrative of stucco work will be shown at the West End Cinema, Coventry-street, to which architects and others interested in building construction are invited. Tickets may be obtained on application to Mr. Frederic Coleman, Regent House, Regent-street, W.

CURRENT PRICES FOR BUILDING WORK IN LONDON.*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	11	6
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	5
Do. to sides of excavation, including shoring	" "	1	0

CONCRETOR.

		s.	d.
Portland cement concrete in foundation 1 to 6	per yard cube	35	0
Add if in underpinning in short lengths	" "	7	6
Add if in floors 6 in. thick	" "	3	6
Add if in beams	" "	4	0
Add if aggregate 1 : 2 : 4	" "	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	3	3

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	30	0	0
Add if in stocks	"	7	10	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	2	0	0

FACINGS.

		s.	d.
Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1½

POINTING.

		s.	d.
Neat flat struck or weathered joint	" "	0	0	3

ARCHES.

		s.	d.
Extra only to the price of ordinary brickwork :—			
Fair external in half brick rings	" "	0	0	10
Axed in stocks	" "	0	1	9
Rubbed and gauged jointed in putty camber or segmental	" "	0	6	0

SUNDRIES.

		s.	d.
Damp course in double course of slates breaking joint and bedded in Portland cement	" "	0	1	1
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	"	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard sup.	4	3
Three-quarter-inch vertical damp course	" "	9	0
½ inch on flats in two thicknesses	" "	6	6
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	3

MASON.

		s.	d.
York stone templates fixed	per foot cube	12	6
York stone sills fixed	" "	21	6
Bath stone and all labour fixed	" "	10	6
Portland stone fixed	" "	19	6

SLATER.

		s.	d.
Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do. 20 in. × 10 in. Do. Do.	"	80	9
Do. 24 in. × 12 in. Do. Do.	"	90	0

CARPENTER AND JOINER.

		s.	d.
Fir framed in plates	per foot cube	5	3
Do. joists	" "	5	9
Do. roofs, floors and partitions	" "	6	3
Do. trusses	" "	8	3

		¾"	1"	1¼"	2"
Deal rough close boarding	per sq.	38/-	44/-	50/-	80/-

		s.	d.
Flat centering for concrete floor, including struts or hangers	"	50	0
Do. to beams	per ft. sup.	1	0
Centres for arches	"	1	6
Gutter boards and bearers	"	1	0

FLOORING.

		¾"	1"	1¼"	1½"
Deal edges shot	per sq.		49/-	58/-	67/-
Do. tongued and grooved	"		54/-	65/-	72/-
Do. matchings	"	45/-	55/-		
Moulded skirting, including backings and grounds	per ft. sup.	1/6	1/9	2/0	2/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	4
Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares double hung, double hung with pulleys, lines and weights : average size	" "	3	9

DOORS.

		1¼"	1½"	2"
Two-panel square framed	per ft. sup.	2/1	2/4	2/6
Four-panel Do.	"	2/5	2/8	2/11
Two-panel moulded both sides	"	2/8	2/11	3/2
Four-panel Do. Do.	"	2/11	3/2	3/5

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1"	1¼"	1½"
Plain deal jamb linings framed	per ft. sup.	1/8	1/9	2/0
Deal shelves and bearers	"	1/5	1/7	1/10
Add if cross tongued	"	2d.	2d.	2d.

STAIRCASES.

	1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1½ in.	per ft. run.	0	9
Mahogany handrail ; average 3 in. × 3 in.	" "	6	0
Add if ramped	" "	11	10
Add if wreathed	" "	23	9

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/4
Sash fasteners	11½d.	Mortice locks	5/3
Casement fasteners	1/5	Patent spring hinges and letting in to floor and	
Casement stays	1/2	making good	19/-
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	17	0
Plain compound girders	"	20	0
Do. stanchions	"	23	0
In roof work	"	28	0

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/11	2/4½	3/7	4/-
Ogee Do. Do.	"	2/4½	3/1	3/10	4/9
Rain-water pipes with ears	"	2/9	3/7		
Extra for shoes and bends	each	4/4	5/11		
Do. stopped ends	"	1/11	2/4½	3/7	4/-
Do. nozzles for inlets	"	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	51	0
Do. Do. in flats	"	49	0
Extra labour and solder in coated cesspools	each	6	9
Welt joint	per ft. run.	0	6
Soldered seam	" "	1	6
Copper nailing	" "	0	6

		½"	¾"	1"	1½"	2"	4"
Drawn lead waste	per ft. run	10d.	1/6	1/9	3/1	3/10	
Do. service	"	1/5	1/11	2/3	3/6		
Do. soil	"						6/2
Bends in lead pipe	each					3/3	8/2
Soldered stop ends	"	1/2	1/8	2/1	2/10	3/6	
Red lead joints	"	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints	"	2/10	3/6	4/-	4/11	6/6	9/9
Lead traps and cleaning screws	"				14/7	19/6	
Bib cocks and joints	"	6/4	9/7	15/4	41/-		
Stop cocks and joints	"	15/4	17/2	25/8	64/-		

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	3
Do. Do. Sirapite	" "	2	6
Do. Do. Keen's	" "	3	6
Add sawn lathing	" "	1	5
Add metal lathing	" "	2	3
Portland cement screed	" "	1	10
Do. plain face	" "	3	0
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	9

GLAZIER.

		s.	d.
21 oz. sheet plain	per foot sup.	0	9
26 oz. Do.	" "	1	1
Obscured sheet	" "	1	3
¼ in. rolled plate	" "	0	9
¼ in. rough rolled or cast plate	" "	0	11
¼ in. wired cast plate	" "	1	5

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	" "	1	2
Preparing for and hanging paper	per piece	2/- to 4/-	

* These prices apply to new buildings only. They cover superintendence by foremen and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

NEW BUILDINGS IN SCOTLAND.

Brechin.—HOUSES.—The T.C. has accepted an offer from the Board of Health regarding the erection of two additional houses on the Trinity-road Housing Site under the old regulations.

Aberdeen.—VARIOUS.—The Corporation has passed plans for the following: House and garage, Royfold-crescent, for the Misses Isabella and Jemima Reid, per Brown & Watt; alterations at Gray's School of Art, Schoolhill, for the governors of Robert Gordon's Technical College, per Mr. R. L. Rollo; alterations and additions, 34, Queen's-road, for Mr. J. H. Coutts, per Mr. A. H. L. Mackinnon; and a golf clubhouse for the Northern Golf Club, per Mr. William E. Gould.

Crieff.—HOUSES.—The Clerk submitted a letter to the T.C. with plans from Mr. R. M'Robie, builder, Crieff, for 20 houses at Nellfield, Crieff, and asking for a supply of water. The matter was remitted to the Burgh Surveyor.

Ayr.—HOUSES.—The T.C. offers a subsidy of £100 per house to builders who will erect houses in conformity with the new Housing Act, 1923. A meeting will be held with the builders in connection with the full proposals, followed by a ratepayers' meeting.

Glasgow.—HOUSES.—The Housing Committee of the Glasgow Corporation recommend that housing schemes be proceeded with in the following areas: Merryflatts, 200 cottage houses; Crossmyloof, 276 tenement houses; and Whitefield-road, 126 houses; as a rehousing scheme, and that the Director of Housing be instructed to prepare and submit layout plans of the areas in question. The Corporation disapproved of the recommendation of the Housing Committee that houses to be erected at Campbell-street, Springburn, be built by direct labour. The matter was remitted to the committee to accept the lowest or best offers of individual private contractors. The committee now recommend the acceptance of offers amounting to £43,486.

Arbroath.—SCHOOL.—The Dean of Guild Court has approved of plans for additions to Parkhouse Public School. The additions include the erection of a one-story brick building on a site at the rear of the school playground for the accommodation of the infants' department, and internal alterations to existing school.

Harthill.—INSTITUTE.—£1,000 has been granted from the miners' welfare fund for the erection of a public institute at Harthill for the miners employed at the Kiveton Park Colliery. The cost of the building and site is £1,600, and efforts are being made to raise the balance.

Falkirk.—HOUSE.—The Dean of Guild Court has passed plans submitted by Marion Jackson, Blinkbonny Lodge, Falkirk, for a house at Drossie-road, estimated to cost about £600.

Uddingston.—MASONIC TEMPLE.—A start has been made with the erection of a masonic temple at Uddingston on a site between Gardenside-terrace, Greenrig-street and Main-street, adjoining the public hall. The funds for this building have been organised by the Building Committee of Lodge St. Bryde 579, Uddingston.

Tenant House Owners.

With a view to contributing towards the solution of the North-West Durham housing problem, the Consett Iron Co., Ltd., has prepared a scheme under which it is offering assistance to its workmen to become the owners of new houses in which they would live. The company announces that it is prepared to erect houses of the bungalow or other types within the area of its operation at Consett, Langley Park, Garesfield, Medomsley, Castleside, Bradley Cottages, Leadgate, Chopwell, and Bensfieldside. Under this scheme the company would apply for the subsidy under the Housing Act, which is expected to amount to a commuted sum of about £70 to £75 per house from the Government, and in some cases £25 extra from the local authority.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted*. † Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modifications*.

ADWICK-LE-STREET.—Construction of a concrete reservoir, capacity of 500,000 gallons, with all puddle flags and excavations, for the U.D.C.:—

E. T. Knight	£4,718 15 0
A. Hyslop	3,668 17 3
Carter Helsby Construction Co.	3,637 1 9
*Swift Bros. & Haslam, Doncaster	3,381 5 6

ALNWICK.—The U.D.C. have accepted the tender of Mr. J. W. White, of High Barnes, Sunderland, for the erection of 24 houses in Swansfield-Park-road, in place of that of Mr. Walker, who has withdrawn his offer to build the houses for £8,373 9s. The new tender is £268 in excess of Mr. Walker's figure if electric light is used, and £292 if gas.

ASHINGTON.—For erection of 66 houses (three-room type) at the Hirst Estate:—
*Ashington Colliery Co., Ltd.—£375 per house.

BRADFORD.—For conversion of the Grand Clothing Hall at corner of Ivegate and Tyrrell-street, into banking premises, for the Bank of Liverpool & Martins, Ltd. E. Morley & Sons, architects, Swan-arcade, Bradford:—
*Michael Booth & Sons, Bradford.

CROOKHALL.—For the erection of a new mission church:—
*The Consett Iron Co., Ltd.

DARTON.—Erection of urinal, at Mapplewell, for the U.D.C.:—
*J. H. Parker, Greenside, Mapplewell £104 6

DARTON.—Erection of mortuary, at Darton:—
*J. H. Parker, Mapplewell £175

DURHAM.—For erection of 12 houses at Ludworth:
J. W. White, Sunderland (per house £478 16s.) £5,745 12
E. Rutter & Son, Esh (per house £440) 5,280 0
*F. W. Goodyear, Durham (per house £425) 5,100 0

DURHAM.—For construction of roads and sewers at Ludworth Housing Scheme:—

R. C. Brebner & Co., Edinburgh	£1,972 0 0
J. W. White, Sunderland	1,685 0 0
A. E. Hobbs, Stockton	1,593 14 1
*Fordyce Bros., Middlesbrough	1,581 17 1

FARSLEY.—For the erection of a new canteen for the workpeople at Reuben Gaunt's, Ltd., Boom Mill:—
*Michael Booth & Son, Bradford.

GLASGOW.—Construction of new boulevard from Anniesland Cross to Duntocher:—
*Sir Robt. M'Alpine & Sons £241,740
(*Less* £9,000 if mechanical appliances used.)

GLASGOW.—For painter work at the Fruit and Vegetable Markets, for the T.C.:—
*James Stirling £1,044 10 3

GLASGOW.—Electric lighting installation at Shettleston and Tollcross Library:—
*Haddow & Co., Ltd. £365 13 3

GLASGOW.—Supply of cable in connection with new fire alarms in Moss Park district:—
*Western Electric Co., Ltd., London £136 11 4

GLASGOW.—Repairing pavement of Kelvinway with tar-macadam:—
*National Asphalte & Concrete Co., Glasgow £323 6 8

GLASGOW.—Construction of games pavilion at Cowlairs Park:—
*J. G. M'Callum, Glasgow £1,087 16 4

GLASGOW.—Various works on houses to be erected at Campbell-street, Springburn:—

Mason work—	
*Elphinstone Forrest	£18,447 0 9
Carpenter work—	
*Wm. Vernal	11,185 16 10
Slater work—	
*P. & T. M'Guckin	1,894 11 0
Plumber work—	
*Hugh Goldie, Coatbridge	8,866 6 1
Plaster work—	
*John Drummond & Son	2,855 7 4
Glazier work—	
*R. White & Son	287 2 8

GLASGOW.—Electric lighting installation, Coplaw Housing Scheme (second development):—
*James Laird & Co. £387 3 0

GLASGOW.—For various works at Dalmarnock Power Station:—

Reinforced concrete, &c., work—	
*William Taylor & Son (Glasgow), Ltd.	£2,145 11 11
Joiner, glazier, and ironmongery work—	
*George Eaglesham	129 6 3
Plumber work—	
*H. Twaddle & Son	149 0 0

HOUGHTON-LE-SPRING.—For 20 houses on East Rainton Site, for the R.D.C.:—
*F. W. Mole, Chester-le-Street £6,406

LEEDS.—For the erection of a new café and flats at Meanwood, for Mr. A. Kirby:—
*Saml. Flockton, Leeds.

LEEDS.—For the conversion of shop premises into a branch bank in Armley, for the Yorkshire Penny Bank, Ltd.:—
*Wm. Thompson, Leeds.

LONDON.—For proposed alterations at residence, for Mr. Magnus Goodfellow, Heathfield. Mr. George Carter, architect, 513, Holloway-road, N.19:—

Webber, Berkshire	£655 12 4
J. C. Mather, London	345 0 0
Arthur King, Ltd., London	342 0 0
*Courtney & Fairburn, Camberwell	340 15 0
*With supplementary works at £421	

LONDON.—For proposed alterations to secretary's and directors' offices, Holloway-road. Mr. George Carter, architect, 513, Holloway-road, N.19:—

J. C. Mather	£235
*Courtney & Fairburn	229

MANCHESTER.—For additions to dye works, for Messrs. W. Hall, Ltd. Messrs. Matley & Brotherton, architects, 11, Old Millgate, Manchester:—
*Tinker & Young, Ltd., Newton.

MANCHESTER.—For alterations to premises, 14, Preston-street and Langworth-street. Messrs. F. Newton & Sons, architects:—
*Shaw & Ribsdale, Moss Side, Manchester.

MANCHESTER.—For extensions to Nurses' Home, Hope Hospital, Pendleton, for the Salford B.C. Messrs. Telford Gunson & Son, architects, 10, Marsden-street, Manchester:—
*Robert Carlyle & Co., Ltd., Old Trafford.

MELTHAM.—For erection of 10 non-parlour houses in two blocks and construction of a new street, for the U.D.C. Messrs. Abbey & Hanson, architects, 11, Cloth Hall-street, Huddersfield:—

Masons and Concreters—	
*J. Wimpenny & Co., Linthwaite	£2,114 1 10 109 12 8
Carpenters and Joiners—	
*Geo. Ainley & Sons, Ltd., Crosland Moor	903 15 0
Plumber—	
*H. Stead, Meltham	510 0 0
Slater, Plasterer, and Painter—	
*J. Wilkinson & Sons, Meltham	280 0 0 298 0 0 65 0 0
Street Works—	
*J. Wimpenny & Co., Linthwaite	372 0 0

OSSETT.—For the erection of 47 houses on the Horbury-road site:—

Bricklayer work—	
*A. Tolson & Sons	£6,929 16 9½
Joiner work—	
*J. H. Hornsell	4,496 19 0
Plumber work—	
*F. Newsome	2,000 0 0
Slater work—	
*T. Brear & Sons	1,400 0 0
Plasterer work—	
*E. Wilson	1,331 6 7
Painter work—	
*R. Robinson	265 17 7

OSSETT.—For erection of two pairs of houses (Types 1 and 2) on Leeds-road site:—

Bricklayer work—		
*A. Tolson & Sons	(Type 1)	£453 2 4
	(Type 2)	367 14 8
Joiner work—		
*W. & E. Whitehead	(Type 1)	329 0 0
	(Type 2)	299 0 0
Plumber work—		
*F. Newsome	(Type 1)	100 0 0
	(Type 2)	90 0 0
Slater work—		
*Shevill & Foster	(Type 1)	83 8 0
	(Type 2)	68 7 0
Plasterer work—		
*R. Clegg & Sons	(Type 1)	76 7 6
	(Type 2)	59 3 0
Painting work—		
*B. Callaghan & Sons	(Type 1)	14 0 0
	(Type 2)	14 0 0

LONDON.—For works at the factories of The Ever-Ready Electrical Company's "Great Britain" Factories, Holloway and Finsbury Park. Mr. George Carter, architect, 513, Holloway-road, N.19:—

	Fonthill-road Factories, Works.	New roof Engine House, Font-hill-road.	Factory Hercules-place.	Factory Bowmans-place.	General Factory Works.
George Slade & Co., Barnsbury Park	£166 15 ..	£550 ..	£273 0 ..		£1,309 15
Patman & Fotheringham, Ltd., London	129 0 ..	424 ..	394 ..	183 0 ..	1,250 0
Courtney & Fairburn, Camberwell	158 0 ..	441 ..	294 ..	118 16 ..	1,011 15
Arthur King, Ltd., Islington	123 0 ..	419 ..	288 ..	112 0 ..	942 0

OSWESTRY.—For erection of proposed Council School, to accommodate 300 pupils, Weston Rhyn, for the Shropshire Education Committee. Mr. George H. Bailey, architect.

J. H. Dorse, Cradley Heath	£9,949	7	11
T. Broad, Ltd., Great Malvern	9,677	0	0
Ames & Sharratt, Ltd., Wolverhampton	9,301	0	0
W. Griffiths, Ellesmere	9,245	15	0
C. Kempster, Oswestry	8,940	0	0
T. G. Huxley, Chester	8,920	0	0
E. H. Nicholas, Shrewsbury	8,703	0	0
G. H. Marshall, Smethwick	8,472	0	0
J. Taylor, Stoke-on-Trent	8,441	16	1
R.B.F. Construction Co., Shrewsbury	8,420	0	0
A. H. Woodhouse, Hanwood	8,028	0	0
H. A. Jones, Wrexham	7,947	0	0
Treasure & Co., Shrewsbury	7,803	0	0
Tilt Bros., Birmingham	7,799	0	0
W. F. Humphreys, Acrefair	7,675	0	0
‡W. Edwards, Shrewsbury	7,675	0	0
Architect's estimate	7,698	0	0

PORTSMOUTH.—Construction of Electricity Substations, for the T.C.:—

Cosham, Drayton, and Bedhampton stations—

*Frank Bevis	(each)	£435	15

Emsworth station—

*Frank Bevis	485	0	

Victoria Park station—

*Frank Bevis	745	0	

PORTSMOUTH.—Repairs to Town Hall Organ:—
*J. J. Binns £3,316

PORTSMOUTH.—Four electric refuse vehicles:—
*General Vehicle Co., Ltd.

PORTSMOUTH.—For additions to Regent Cinema, London-road. Mr. A. E. Tutte, architect, 38, Commercial-road, Portsmouth:—

E. & A. Sprigings	£398
A. E. Porter	379
John Lay & Co.	348
F. J. Privett	347
Tanner Bros.	299
*J. Crockerell	294

SCARBOROUGH.—For the erection of 12 houses on the Edgehill Park Estate, for the Corporation:—
*Anthony Lyons, Malton £5,584

Note.—The M.H. decline to sanction acceptance of this tender, but Corporation propose to claim subsidy of £75 per house.

SOUTHEND-ON-SEA.—Supply of cast-iron pipes, &c., for Leigh West Sewage Works, for the T.C.:—
*Stanton Ironworks Co., Ltd., Nottingham £1,771 12 1

For 15-in. syphon and 10-in. overflow pipe for Leigh Sewage Works, for the T.C.:—
*Thorby & Matthews, Southend £3,933 1 11

Re-surfacing main road with bituminous material:—
*Whitehall Asphalt Co., Ltd., London, 9s. 5d. and 9s. 7d. per yd. super (with five years' maintenance at 3d. to 5d. per yd.).

Making up Fairfax Drive (Sec. 6):—
*Iles £705

South View Drive:—
*Iles £2,120

Porter's Grange-avenue:—
*Iles £1,610

Grange-gardens:—
*Iles £830

Lime-avenue:—
*Abbott & Haddington £2,324

Eaton-road:—
*Abbott & Haddington £264

SOUTHEND-ON-SEA.—For work in connection with Council schools:—

Wrought iron (5ft.) fencing—
*Armstrong & Main, Ltd.—11s. 6d. per yard.

New boiler at High School—
*Watkin Heating Co., Southend, £165.

Wrought iron fencing for Memorial Ground—
*Bayliss, Jones & Bayliss—14s. per yard.

Gates—
*Bayliss, Jones & Bayliss—£8 10s

THOMER.—For the erection of a village Victory Hall:—
*W. J. & R. Turnbull, Leeds (all trades)

WORSBOROUGH.—For erection of 22 houses, for the U.D.C.:—
*Oakland & Co., Wombwell £8,250

WORSBOROUGH.—For sewer work at Kingwell:—
*Rawson Porter, Worsborough £392 6

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